Alternative instruments for agricultural support
A survey of measures applied by competitors of the EU

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This report presents a survey of agricultural policy instruments applied in the United States of America (US), Canada, Australia and New Zealand. The material forms a base of reference for the search of alternative instruments for the EU, the Netherlands in particular. Such instruments should be aimed at achieving the objectives of the Common Agricultural Policy, and take into account the budgetary limits, and the constraints of the WTO agreement. Furthermore, the new enlargement of the EU and the next round of WTO negotiations should be anticipated. It is concluded that promising alternatives for the current instruments of the CAP may be found in decoupled (or recoupled) income payments, income safety nets, risk management schemes, and export credit programmes.

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Preface

This report forms the first result of a two-phase project commissioned by the Dutch Ministry of Agriculture, Nature Management and Fisheries (LNV), and presents a survey of agricultural policy instruments applied in the US, Canada, Australia and New Zealand. The survey is based on desk research performed at the General Economics and Statistics Division during the period of September 1999-February 2000.

The draft report was discussed in an informal meeting at our institute on December 23, 1999. This meeting was chaired by L.C. Smits (LNV) and was attended by a delegation of the ministry headed by A.J. Vermuë, and a delegation of the general farmers organisation LTO-Nederland with its president G. Doornbos.

Valuable comments on the draft report have also been made by J.J. Groeneveld, Dutch agricultural counsellor for North America, by J. Schotanus, international expert of the Ministry (LNV), and by C.J.A.M. de Bont (Agriculture Division of the LEI). The assistance of Twente University student Sandra Weber, who collected information on Australia and New Zealand, is gratefully acknowledged.

Although many people have contributed, the responsibility for the contents of the report lies wholly with the institute.

The managing director,

Prof Dr L.C. Zachariasse

Samenvatting

Inleiding
De doelstellingen van het Gemeenschappelijk Landbouwbeleid zijn verbreed, de budgetlasten aan grenzen gebonden en de verplichtingen krachtens het WTO-akkoord gaan steeds meer knellen. Met bovendien een verdere uitbreiding van de EU en een nieuwe ronde van WTO-onderhandelingen voor de deur, behoeft het EU-landbouwbeleidsinstrumentarium mogelijk verdere aanpassing en aanvulling. Met het oog daarop, biedt dit rapport een overzicht van landbouwsteunmaatregelen in een viertal belangrijke (concurrerende) WTO-partnerlanden: de Verenigde Staten van Amerika, Canada, Australië en Nieuw-Zeeland. Het overzicht dient als basis voor vervolgonderzoek, waarbij een selectie van beleidsinstrumenten nader beoordeeld wordt op mogelijke toepassing in de EU en Nederland.

Landbouwsteun in de Verenigde Staten van Amerika
Volgens de OECD bedroeg de totale landbouwsteun in de VS 1,15% van het BBP in 1998; voor hetzelfde jaar is de landbouwsteun in de EU becijferd op 1,36% van het BBP. De hoofdmoot van de landbouwbegroting van de VS wordt gevormd door de post 'binnenlandse voedselprogramma's'. Eveneens belangrijk zijn de zogenaamde 'commodity programmes'. Deze programma's voorzien in prijssteun (commodity loans, loan deficiency payments) en inkomenssteun (production flexibility contracts, disaster assistance, etcetera). De uitgaven aan prijs- en inkomenssteun zijn na 1997 in reactie op de lage wereldmarktprijzen en de vele natuurrampen sterk toegenomen. In WTO-verband wordt prijssteun gerekend tot de gele box steun, die in beginsel onderworpen is aan reductieverplichtingen. Dit geldt niet voor de minder handelsverstorende steun die tot de groene box behoort. Sinds de Farm Bill uit 1996 is de aandacht voor risicoverzekeringen toegenomen. De meeste risicoverzekeringen hebben betrekking op oogstopbrengsten (yield-based insurance). Revenue insurance (opbrengstenverzekering), die naast een oogst- ook een prijscomponent heeft, is echter in opkomst. Landbouwmilieuprogramma's nemen eveneens in aantal en omvang toe. Verder is er een breed scala aan exportbevorderingsinstrumenten beschikbaar, waaronder exportkrediet(verzekeringen) en exportsubsidies. Van oudsher zijn er ook omvangrijke buitenlandse voedselhulpprogramma's. Tot slot worden diverse structuurmaatregelen gebruikt, zoals steun voor plattelandsontwikkeling, onderzoek, onderwijs en voorlichting. De meeste van deze maatregelen behoren in WTO-verband tot de groene box. Voor exportsubsidies gelden bepaalde (geleidelijk dalende) plafonds terwijl er voor exportkredieten vooralsnog geen afspraken binnen de WTO zijn gemaakt.

Landbouwsteun in Canada
In Canada kwam de steun aan de landbouwsector in 1998 overeen met 0,72% van het BBP. Een opvallend kenmerk van het Canadese landbouwbeleid betreft het systeem van marktregulering, waaronder de 'producer boards'. Voor de zuivel- en pluimveesector voorziet deze marktordening in prijssteun. Canada's bekendste 'producer board' en tevens 's werelds

grootste tarwe-exporteur is de Canadian Wheat Board (die tegenwoordig commercieel opereert). Producer boards worden binnen de WTO aangemerkt als State Trading Entreprises (STEs) en dienen als zodanig genotificeerd te worden aan de WTO. Dit houdt verder echter geen verplichtingen in. Inkomensstabilisatieprogramma's zijn een ander belangrijk onderdeel van het Canadese landbouwbeleid. Tot deze programma's behoren onder andere risicoverzekeringen en NISA. NISA is een fonds waarin boeren in tijden van hoge inkomens geld kunnen storten. De overheid vult deze spaartegoeden aan en in tijden van lage inkomens kunnen de tegoeden opgenomen worden. De meeste van deze inkomensondersteunende maatregelen vallen ofwel onder de groene-boxsteun ofwel onder de *de minimis* clausule. Tot slot gebruikt Canada diverse exportbevorderingsinstrumenten en structuurmaatregelen als landbouwmilieuprogramma's, onderzoek, onderwijs, en infrastructuurprojecten, en investeringssubsidies.

Landbouwsteun in Australië

In Australië bedroeg de landbouwsteun 0.49% van het BBP in 1998. Bijna eenderde van de totale landbouwsteun valt onder structuurbeleid. Hierbij gaat het om infrastructuurprojecten, onderwijs, onderzoek, advies, landbouwmilieuprogramma's en dergelijke. Net als in Canada zijn producer boards (bijv. de Australian Wheat Board en de Queensland Sugar Corporation) een bekend fenomeen. Deze exportmonopolies worden door een aantal andere WTO-partners (zoals de VS) sterk bekritiseerd. Instrumenten die tot doel hebben om een soort vangnet voor de agrarische sector te creëren zijn het Farm Management Deposit Scheme (een soort spaarfonds), noodhulp voor buitengewone omstandigheden, inkomensondersteuning voor boeren met zeer lage inkomens en saneringssubsidies. In WTO-verband vallen deze maatregelen onder de *de minimis* regel vanwege het geringe deel dat de steun uitmaakt van de totale landbouwproductiewaarde. Belangrijker dan de genoemde steun zijn de vele exportbevorderingsprojecten, die vooral gericht zijn op de Aziatische markt. Net zoals in de VS worden er in Australië exportkredieten verstrekt.

Landbouwsteun in Nieuw-Zeeland

De landbouwsteun in Nieuw Zeeland behoort met 0,19% van het BBP tot de laagste van alle OECD-landen. Meer dan 55% van de steun komt voor rekening van structuurmaatregelen als onderzoek en (gezondheids-) controlediensten. Daarnaast zijn er enkele milieu- en exportbevorderingsprogramma's. Deze maatregelen zijn niet onderworpen aan reductieverplichtingen van de WTO. De producer boards, waarvan er verschillende zijn in Nieuw-Zeeland (zoals de New Zealand Dairy Board), vormen binnen internationaal handelsoverleg echter steeds vaker een discussiepunt.

Conclusie

Het merendeel van de in dit rapport beschreven beleidsinstrumenten vormt om uiteenlopende redenen geen alternatief voor het huidige landbouwbeleidsinstrumentarium van de EU. De volgende instrumenten zouden dat wellicht wel kunnen zijn: ontkoppelde toeslagen, inkomensstabilisatiefondsen, risicoverzekeringen, en exportkredietprogramma's. In de tweede fase van dit onderzoek zal nagegaan worden in hoeverre deze instrumenten werkelijk een aanvulling op of alternatief voor het huidige landbouwbeleidsintrumentarium van de EU kunnen zijn.

Summary

Introduction
The objectives of the Common Agricultural Policy (CAP) have been broadened, the budgetary costs have been limited, and the WTO agreement has constrained the operation of the classical instruments of the CAP. Taking into account the further enlargement of the EU and the next round of WTO negotiations, alternative policy instruments for European agriculture could be helpful in achieving the objectives of the CAP. In search of alternatives, this report presents an overview of policy instruments applied in four selected countries: the US, Canada, Australia and New Zealand. The overview is to form a base of reference for subsequent analyses of alternative instruments for the EU, the Netherlands in particular.

Agricultural support in the US
Total agricultural support as measured by the OECD amounts to 1.15% of GDP in the US in 1998, as compared to 1.36% in the EU. In terms of the gross value of total assistance, domestic food aid forms the most important element of the US agricultural policies. Commodity programmes are another important element. These programmes consist of agricultural price support (commodity loans, loan deficiency programmes etcetera) and direct income payments (production flexibility contracts, disaster assistance etcetera). Since 1998, commodity expenditures have been increased sharply to compensate for the effects of natural disasters and depressed world market prices. Most of the price support programmes are principally subject to WTO reduction commitments as they are considered as amber box policies. Direct income support measures generally fall under the green box. Risk management programmes have gained importance since the 1996 Farm Bill. Most of the insurance programmes are 'yield based'. This means that the production history of the farmer is used to calculate the guarantee level. Revenue insurance programs combine the production guarantee component of yield insurance with a price guarantee. Conservation policies have also become more important. Next, there is a wide variety of programmes available to support agricultural exports, including export credit guarantees and export subsidies. In addition to this, foreign food aid plays an important role. Finally, several general services programmes are in operation, such as rural development support, credit and farm loans, and research, education and extension programmes. General services are considered as green box policies within the WTO. Export subsidies are subject to export subsidy reduction commitments, whereas export credits do not fall under any WTO commitment.

Agricultural support in Canada
The level of Canada's agricultural support, as measured by the OECD, is 0.72% of GDP. A striking feature of Canada's agricultural policy is the system of market regulations, including producer boards. For dairy and poultry, Canada's supply management system provides price support. The Canadian Wheat Board - nowadays a fully commercial organisation - is the world's largest exporter of wheat. Producer boards are considered as State Trading En-

terprises (STEs), which have to be notified to the WTO. However, no specific WTO obligations or commitments are applied to STEs yet. Income support and stabilisation policies account for the largest share of Canadian government support expenditure to the agri-food sector. Crop insurance, the Net Income Stabilisation Account (NISA), and some province-specific programmes make up a safety net framework. NISA is a voluntary programme that assists farmers in stabilising incomes for the long term. This is done by establishing a fund which is based on contributions from farmers (and the government) during good years in order to provide withdrawals during poor years. Most of these income support measures are considered as amber box policies. Some measures fall under the so-called *de minimis* rule. Like other countries considered in this report, Canada provides export support and general support such as credit to farmers, agri-environmental programmes, rural support measures and research, education and extension initiatives.

Agricultural support in Australia

The OECD Total Support Estimate for Australia amounted to only 0.49% of the country's GDP in 1998. Almost a third of Australia's total agricultural support is spent on general services such as research, education, extension, rural development, agri-environmental programmes and infrastructure projects. Like in Canada, producer boards (including the Australian Wheat Board and the Queensland Sugar Corporation) are a well-known phenomenon in Australia. These export monopolies (STEs) have been under criticism of several other WTO partners. Support programmes that aim to provide a safety net for farmers include the Farm Magement Deposit Scheme (a saving scheme), exceptional circumstances assistance, welfare support to low income farmers and retirement assistance. Since most of these programmes involve very low levels of assistance, they fall under the WTO *de minimis* rule. Export support is a major element of Australia's agricultural policy. Most export promotion programmes are directed to the Asian market. Just as the US, Australia offers export credit for supporting agricultural exports.

Agricultural support in New Zealand

New Zealand's level of support (0.19% of GDP) is even below Australia's. General services account for more than 55% of New Zealand's agricultural support. The primary general services are basic research and the control of pests and diseases. In addition to this, there is some support for agri-environmental policies and compensation for adverse events. As a consequence, domestic support in New Zealand is not subject to WTO reduction commitments. However, it is to be expected that the producer boards (including the New Zealand Dairy Board) will be under attack in the new round of trade negotiations.

Conclusion

For various reasons, a number of measures outlined in the report are not desirable policy alternatives for the EU. On the other hand, the following measures may be viewed as promising alternatives: decoupled (or recoupled) income payments, income stabilisation funds; risk management programmes; and export credit programmes. It should be further assessed whether these instruments really form attractive instruments for the CAP, either in combination with current instruments or as substitutes, and applied at Community level or at the national level. Such an assessment is the task of the next phase of this project.

1. Introduction

1.1 Objectives of the CAP

Agricultural policies are applied all over the world. With diverse objectives and in different ways, governments are influencing the structure and development of agricultural production, agricultural trade relations and agricultural price and income formation. The policies are typically aimed at national objectives but usually involve measures with repercussions for other countries. Therefore international co-ordination of agricultural policies is valued highly, but only achieved with great difficulty.

A rather successful example of international agricultural policy is offered by the Common Agricultural Policy (CAP) of the European Union. The Treaty of Rome, by which six countries set up the European Economic Community (EEC), and which entered into force in 1958, formed the starting point. Article 38 of the Treaty stated the direction for agriculture: free trade within the common market. The objectives of the CAP were outlined in Article 39:

- to increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilisation of the factors of production, in particular labour;
- thus to ensure a fair standard of living for the agricultural community, in particular by increasing the individual earnings of persons engaged in agriculture;
- to stabilise markets;
- to assure the availability of supplies;
- to ensure that supplies reach consumers at reasonable prices.

The common market for agricultural products was to be established by specific rules. After a transition period of some years, common guarantee prices for the main agricultural products of the EEC-6 were introduced in 1968. These prices were to be realised by a combination of policy instruments: variable levies on imports, intervention in the domestic market, control of stocks (bought at minimum prices) and variable export subsidies (restitutions or refunds). Some products were not included in the system of levies on imports and subsidies on exports, especially oilseeds, as was agreed with the partners in GATT, mainly the US

Initially, the CAP could be operated with rather low budgetary expenditures. However, thanks to steady productivity gains, supply developed more rapidly than domestic demand. This led to rising costs of market interventions and export subsidies, which were countered by various measures to restrict production (supply control) in the eighties. Thereby the quota system on milk production proved more effective than the system of set aside in the cereals sector.

Also trading partners of the EU have called for changes in the CAP. After long and difficult negotiations, the Uruguay Round Agriculture Agreement on liberalising agricultural trade was concluded in 1994. By reducing internal support, improving market access and limiting export support, this agreement has implied rather strict constraints for the operation of the CAP. Consequently a tendency has developed to adjust the market organisations of the CAP and to provide income support by direct payments related to area planted and number of animals. This process started with the Mac Sharry reform of 1992, and was followed by the decisions on the Agenda 2000 package made in 1999. The result of the Mac Sharry reform and the Agenda 2000 decisions is a policy system with (lower) guarantee prices combined with various direct payments directly or indirectly linked to the volume of production.

In relation to the Agenda 2000 reforms, the European Commission has reformulated the objectives of the CAP as promoting (EC, 1999):

- a competitive agricultural sector which is capable of exploiting the opportunities existing on world markets without excessive subsidy, while at the same time ensuring a fair standard of living for the agricultural community;
- production methods which are safe, capable of supplying quality products that meet consumer demand;
- diversity, reflecting the rich tradition of European food production;
- vibrant rural communities capable of generating employment opportunities for the rural population;
- an agricultural sector that is sustainable in environmental terms, contributes to the preservation of natural resources and the natural heritage and maintains the visual amenity of the countryside;
- clear dividing lines between the decisions that have to be taken jointly at the EU level and those which should remain in the hands of the EU member states;
- an agricultural policy that establishes a clear connection between public support and the range of services which society as a whole receives from the farming community.

In short, the European Union ' …seeks to support the maintenance of the specific model of agriculture which is a key part of Europe's heritage, one that recognises the multifunctional nature of European agriculture and the wide range of benefits it produces.'

1.2 Purpose and structure of this study

In order to achieve the objectives of the CAP and taking into account the further enlargement of the EU and the next round of WTO negotiations, alternative policy instruments for European agriculture could be welcome. In the negotiations of the 'Millennium Round', the EU is generally expected to be under pressure to further liberalise (reform) its policies (Silvis and Van Rijswick, 1999).

This study forms (the first) part of a study that is made up of two phases. The objective of this first phase is *to describe the agricultural policies of EU's competitors and WTO partners*, so as *to find out if there are alternative instruments for agricultural support in the EU*. These alternative policy instruments should be compatible with the 'new objectives' of the CAP (within an enlarged EU) as considered in the foregoing section as well as with future WTO commitments.

This phase aims to present an overview of policy instruments applied in the selected countries but which are not used in the CAP at present. The countries considered are important agricultural exporters and competitors of the EU in international markets: the US, Canada, Australia and New Zealand. The overview is to form a base of reference for subsequent in depth analyses of alternative instruments. In the next phase of the project it will be assessed whether the instruments could offer viable alternatives for current policy instruments within the EU, the Netherlands in particular.

Structure
Based on desk research (mostly governmental sources), the information is structured in four separate country chapters: US, Canada, Australia and New Zealand (from 5 to 8). These chapters are preceded by more general chapters, respectively on measures of agricultural support (chapter 2), on the position of policy measures in the Uruguay Round Agriculture Agreement (chapter 3), and on quantitative indications of support in the European Union in comparison to the countries concerned, as well as to Japan (chapter 4). The concluding chapter of the report (chapter 9) presents some leads for the second phase of the research project.

2. Measures of agricultural support

2.1 Classifying agricultural support

There exists a large variety of agricultural support measures, which we will briefly address in this chapter. Only the major characteristics of the support measures are highlighted, in order to provide some theoretical insight in the mechanisms of these measures. This will serve as background for the remainder of the report.

In a schematic classification of public food and agricultural policy, Halcrow et al. (1994) distinguish price and income policy measures from developmental policies. A similar distinction is found in several other publications on agricultural policies (Koester 1981; De Hoogh, 1998). The distinction is also found in the OECD classification of policy measures (chapter 3) and in the treatment of agricultural support in the URAA (chapter 4). In the international debate on policy reform, market and price policies are generally much more sensitive than developmental policies.

The final section of this chapter is devoted to developmental policies (section 2.3). The following section deals with price and income policy measures (section 2.2). Before turning to direct income support measures, market measures are considered, including combined price policies, supply control, cost-reducing policy measures, deficiency payments and risk-reducing measures.

2.2 Price and income policy measures

Market price support through a combination of policy measures

There are numerous forms of agricultural income support. Usually, agricultural policies are a combination of several measures. One could raise agricultural income through support of market prices, in such a way that domestic market prices are higher than world market prices. The classic price support system of the EU for example, consisted of import levies, intervention prices and export restitutions to establish minimum price levels at the domestic market. Market price support results in domestic prices above world market level and consequently in a quantity produced above the level that would be reached without support. Net, the income of farmers will increase. Since prices will go up, consumer expenditure will rise and consumption will fall. If the country concerned is net importer, government earnings will increase, as the government will receive import levies. In the case of a net exporting country, this policy will lead to extra government expenditure, as export refunds have to be paid or supplies have to be bought by the government. In conclusion, this system of price support can be regarded as an income redistribution policy from consumers to producers.

Supply control

Measures of controlling agricultural supply are often used in combination with other price support measures. Domestic agricultural supply can for example be controlled by production quotas, (land) retirement policies, and 'stocking'. In the latter case, the production is reduced to the proportion of total output that is sold on the domestic market. The government can pay incentives to divert part of output to use in a non-competing market. Government-financed intervention agencies may buy products to prevent prices from falling beneath some specified level. There are several ways to get rid of the surplus production, such as: destruction of the surplus, food aid, export via specially negotiated trading arrangements, give away to 'needy groups', and storage (in the hope that prices will rise again). In addition, governments have a variety of other instruments to promote the sale of agro-food products, financial instruments as well as non-financial instruments. Instruments to boost the sale of agricultural goods could be export credits, diplomacy, promotion, information, and subsidised projects in developing countries.

Protection against imports can be carried out by import levies or import quotas (or bans). Import levies could be a fixed amount of the import price or a variable levy (between the import price and a specific minimum price). The effect of an import levy or an import quota is an increase in market prices and consequently a fall in world market prices.

Cost-reducing measures

Farm cost-reducing measures form a separate group of support (Ritson, 1977). A reduction of farm costs through a subsidy on farm inputs (for example labour or fuel) would result in raised farm profits and consequently, in an increased quantity demanded of the cheaper (subsidised) input. Subsequently, the supply of that particular product will increase. There will also be a shift in the quantity demanded of inputs, depending on whether the tendency for more of all inputs to be used because of the higher level of output outweighs the tendency for the cheaper input to be substituted for all other inputs. The increased output could have a depressing price effect, so that revenues could eventually disappear. Hence, a policy of subsidising input prices might not be successful unless it is combined with other policy measures.

Cost-reducing measures may also be applied in the agricultural industry. For example, processing subsidies have been applied by the EU for oilseeds, tomatoes, starch from potatoes. This kind of support may also be aimed at developing new outlets for farm products in the non-food sector (fuels, fibres, packing and construction materials).

Income support through deficiency payments

By raising incomes through deficiency payments, market prices are not directly affected by the policy. Deficiency payments (from the Treasury) make up the difference between the market price and a specific guarantee price of that particular product. In this case, the market price is equal to the world market price, but the producer price is reached by means of a deficiency payment. On the supply side the deficiency payment causes production to rise. For the producers, the effect of a deficiency payment is similar to that of the price support system mentioned above. At the demand side, there are no price effects so that consumption is not influenced. The burden of deficiency payments is completely borne by the government budget (i.e. the taxpayers). From an economic viewpoint, deficiency payments are considered more efficient than the above-mentioned price support mechanism, since consumers are not affected via price alternations. With respect to trade, the effect of deficiency payments is a decrease of imports and an increase of exports when the output goes up above the level of total domestic demand. If the country accounts for a significant proportion of total world supplies, the deficiency payment will lead to a decrease of the world market price. The depressing effect of the policy on world prices could bring about international conflicts. The 'political' disadvantage of deficiency payments is that they are more visible in the government's budgetary spending than a system of price support.

Risk reducing measures
Risk insurance is an agricultural policy instrument that has been introduced rather recently, although it has been well known for a long time now that farming is a risky business. In general, risk-reducing measures are aimed at suppressing cyclic movements. In some cases, farmers buy commercial insurance, but in other cases governments do completely or partially subsidise insurance fees. Moreover, governments subsidise and set up projects in which farmers are learned to manage risks. There are several types of agricultural insurance such as hail insurance and export credit insurance. (Subsidised) insurance is offered to limit a farmer's risk. Some risks are unique to agriculture, such as the risk of bad weather, significantly reducing yields within a year, and risks of (contagious) animal and crop diseases. Other risks, such as price or institutional risks - risks that result from changes in policies and regulations - are common to all businesses. The effects of risk-reducing policies on agricultural markets are more or less indirect. Therefore, specific analyses are needed to assess the extent to which these policies are distorting world markets.

Direct income support
Other forms of income support consist of payments based on output levels, payments based on area planted/animal numbers, payments based on historical entitlements and payments based on input use or input constraints. Furthermore, income support may be based on a farmer's income level or on an established minimum income. In this case, direct payments are 'decoupled'. Decoupled income support means that the size of the payment does not depend on the amount of crop produced or the level of the market price. An advantage of 'direct income payments' is that it is less likely that these are in conflict with other goals of agricultural policy (Ritson, 1977). Direct income supplementation is politically sensitive due to the fact that this type of support is not popular among the farming community itself - the psychological association with charity - and because the full transfer is clearly visible to the taxpayer.

2.3 Developmental policies

Increasing competitiveness
Traditionally, developmental policy measures attempt to raise agricultural productivity by supporting agricultural investments, and sponsoring research and development, agricultural education and information services. There are also policy measures to develop the agri-

cultural processing industry by supporting investments, credits or by (co-)financing research and development of new products.

Developmental policies are also known as structural policies. To improve the structure of agriculture, programmes have been developed to assist farmers and workers to discontinue in agriculture, authorities can grant subsidies for retraining, compensations for removal costs, or retirement pensions. Generally speaking, developmental policies not only serve producers but also consumers, because the benefits of improved efficiency result in lower consumer prices. Efficiency policies may be in conflict with price and income policies, because productivity and output increases could lead to market imbalances. On the other side, income support may slow down the process of structural adjustment of the agricultural sector.

Policies for sustainable agriculture

For agricultural systems to be sustainable from the societal point of view, the beneficial use of land and natural resources for agricultural production has to be in line with society's values relating to the protection of the environment and cultural heritage. Sustainable development refers to a 'development which meets the need of the present without compromising the ability of future generations to meet their own needs'. This entails preserving the overall balance and value of the natural capital stock and considering the real socio-economic costs and benefits of consumption and production in the short, medium and long-term. 'Sustainable agriculture' in a narrow sense, reflecting the self-interest of producers, would call for a management of natural resources in a way which ensures that the benefits are also available in the future. The broader understanding of sustainability extends, however, to features linked to land and land use such as the protection of landscapes, habitats and bio-diversity, and to overall objectives such as the quality of drinking water and air. In recent years, the quality and safety of food, and the welfare of farm animals, have become more prominent policy issues, perceived as being closely related with the environment.

Agricultural policy should improve the allocation of resources, reduce incentives to use polluting chemical inputs and farm environmentally sensitive land. Agricultural policy reform may be a necessary condition, but it is certainly not always a sufficient condition to improve environmental performance of agriculture.

Given the diversity and site specificity of agro-ecological conditions, local, producer-based approaches, coupled with relevant research, development, training, information and advice would appear to be high on the list of 'sound' policy practices. These approaches focus on the 'public good' aspects of agriculture, reflect the differences across farming, allow for the development of market-based innovations, and recognise that policy responses are required where markets fail to take account of the non-marketed positive and negative impacts of agriculture on the environment (OECD, 1999).

3. Quantitative indications of agricultural support

3.1 Introduction

This chapter highlights the level of agricultural support in developed countries. It is based on the measurements published by the OECD in its annual Monitoring and Evaluation Report (OECD, 1999). The attention is focused on trends in the overall level and composition of agricultural support in Australia, Canada, the European Union, Japan, New Zealand, and the US. Together these countries account for 85% of total agricultural support in OECD member countries, as measured by the Total Support Estimate (Table 3.1). In the group of other OECD countries, accounting for 15% of support, for example Norway and Switzerland maintain high levels of support.

Table 3.1 Total Support Estimate in selected OECD countries, 1996-1998

Country	Million ecu	%
Australia	1,597	0.5
Canada	3,861	1.3
European Union	110,747	37.1
Japan	56,141	18.8
New Zealand	127	0.0
US	72,974	24.5
Other OECD countries	43,771	14.7
OECD	298,218	100.0

Source: OECD, PSE/CSE database.

The OECD indicators measure support arising from agricultural policies relative to a situation without such policies, i.e. when producers and consumers are subject only to general policies (including economic, social, environmental and tax policies) of the country. It should be stressed that the support measures have a static character and do not gauge dynamic effects on income or trade if the agricultural policy measures would be abolished.

The classification of total transfers associated with agricultural policies (TSE - Total Support Estimate), groups the policy measures into three main categories:

- PSE (Producer Support Estimate): transfers from consumers and taxpayers to producers individually;
- CSE (Consumer Support Estimate): transfers to (from) consumers of agricultural commodities individually;
- GSSE (General Services Support Estimate): transfers to general services provided to agriculture collectively.

The values of these indicators are expressed in monetary terms (PSE, CSE, GSSE and TSE), but also in ratios. The denominators have been chosen in such a way that a meaningful indicator results. As the ratios take account of the effect of inflation on both numerator and denominator, this effect is eliminated. In general, ratios are more representative and appropriate measures to compare the relative support levels over time and across countries than the monetary expressions. An example is the producer Nominal Assistance Coefficient (producer NAC), which expresses the PSE in a ratio to the value of total gross farm receipts valued at world market prices, without budgetary support. The indicators are further explained in appendices of this report.

3.2 Trends in the overall level of agricultural support

The overall level of support to agriculture for the OECD area is calculated at 1.3% of GDP in 1996-1998, down from 1.7% in 1986-1988 (Table 3.2). The shares of the PSE and the GSSE in the TSE remained relatively stable over the decade at about 75% and 20% respectively, the remainder being budgetary subsidies to consumers.

Table 3.2 Estimates of support to agriculture in OECD (billion ecu)

	1986-1988	1996-1998	1998p
Producer Support Estimate (PSE)	224	221	245
Percentage PSE	41	33	37
Producer NAC	1,69	1,50	1,59
General Services Support Estimate (GSSE)	56	56	56
GSSE as a share of TSE (%)	19.0	18.8	17.2
Consumer Support Estimate (CSE)	-174	-147	-162
Percentage CSE	-36	-25	-29
Consumer NAC	1,56	1,34	1,40
Total Support Estimate (TSE)	297	298	324
TSE as a share of GDP (%)	1.7	1.3	1.4

Note: p = provisional.
Source: OECD.

Over the last decade, the consumer contribution to the financing of total support to agriculture, as measured by the TSE, decreased by about 10 percentage points to 53%, the remainder being financed from budgetary sources. However, significant differences in the sources of financing as well as in the level and composition of support to agriculture persist across countries (and commodities). Among the selected countries, the TSE per capita ranged from about 402 ecu in Japan to 23 ecu in New Zealand in 1998 (Table 3.3).

The percentage PSE, which measures the level of support to agricultural producers, has been on a slowly downward trend, declining from 41% in 1986-1988 to 33 in 1996-1998. This can be expressed as support to producers being a third of total gross farm receipts, including budgetary support. In other words, as measured by the producer NAC of 1.50 in 1996-1998, total gross receipts were 50% higher than at world market prices without budgetary support. The PSE was 32% in 1997, but increased to 37% in 1998, due to a sharp fall in world market prices, which was not matched by a fall in supported producer prices.

Table 3.3 Total Support Estimate per capita by selected OECD countries

Country	1986-1988	1996-1998	1998p
Australia	77	86	82
Canada	245	128	125
European Union	316	297	341
Japan	430	445	402
New Zealand	167	34	23
US	334	273	325
OECD	224	203	223

Note: p = provisional; EU-12 for 1986-1988, EU-15 for 1998.
Source: OECD, PSE/CSE database.

The composition of support to producers has also changed over the last decade (Table 3.4). The share of market price support fell from 77% in 1986-1988 to 67% in 1996-1998, and the share of payments based on output halved to 3%. But the share of payments based on area or animal numbers doubled to 13%. The share of payments based on input use (for example, interest concessions, capital grants) have been consistent around 9%. Although payments based on constraints on the use of fixed and variable inputs (including environmental constraints) have increased nearly three fold, they represent only about 3% of support. The share of payments based on overall farming income remains very low, representing less than 1% of support. Overall, although with wide variations across countries, around 80% of support to producers in OECD still is based on output, area or animal numbers.

Table 3.4 Composition of producer support estimate in OECD and selected member countries, 1986-1998p (percentage share in PSE)

Country/ Region	Period	Market price support	Payments based on:						
			Output	Area planted/ Animal number	Historic entitle-ments	Input use	Input con-straints	Overall farm income	Other
Australia	1986-1988	55	0	0	0	16	0	22	7
	1996-1998	57	4	0	0	18	0	15	6
Canada	1986-1988	49	17	16	0	15	0	0	2
	1996-1998	57	8	5	8	12	0	9	0
Euro-pean Union	1986-1988	84	6	2	0	7	1	0	0
	1996-1998	56	4	26	1	9	4	0	1
Japan	1986-1988	90	3	0	0	4	3	0	0
	1996-1998	91	2	0	0	4	2	0	0
New Zealand	1986-1988	19	0	0	37	39	0	5	0
	1996-1998	74	0	0	0	26	0	1	0
US	1986-1988	48	7	26	0	13	2	2	3
	1996-1998	50	3	4	19	13	5	2	4
OECD	1986-1988	77	5	6	0	8	1	1	1
	1996-1998	67	3	13	4	9	3	1	1

Note: p = provisional.
Source: OECD, Monitoring and Evaluation Report.

Reflecting the shift to budgetary payments, the percentage CSE, which measures the share of consumption expenditure due to agricultural policies, fell from 36% in 1986-1988 to 25% in 1996-1998. However, the percentage CSE increased to 29% in 1998, mainly because of the increase in market price support to farmers. This was due to the fall in world market prices.

3.3 Trends in the level of support by country

There are wide variations in the level and composition of support for individual countries (and commodities) among OECD countries, as there are also wide variations in farm structures, natural, social and economic conditions, and trade positions. In 1996-1998, the share of GDP to support agriculture, as measured by the percentage TSE, ranged from below 1% in Australia and New Zealand to 1.14 in the European Union and 1.57 in Japan (Figure 3.1).

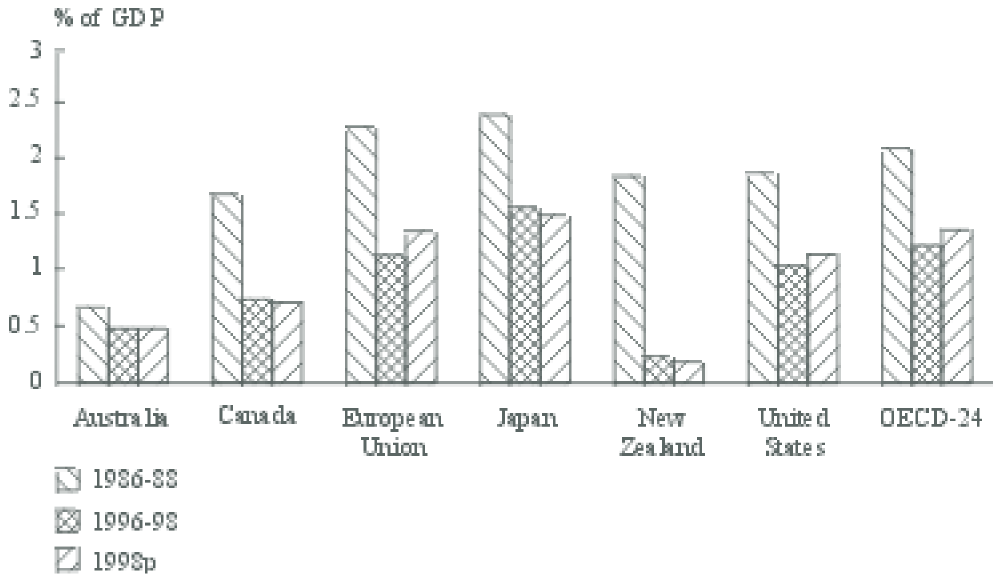

Figure 3.1 Total Support Estimate by selected OECD countries (percentage of GDP)
Notes: p = provisional; EU-12 for 1986-1988, EU-15 from 1995; OECD-24 excludes most recent Member countries.
Source: OECD.

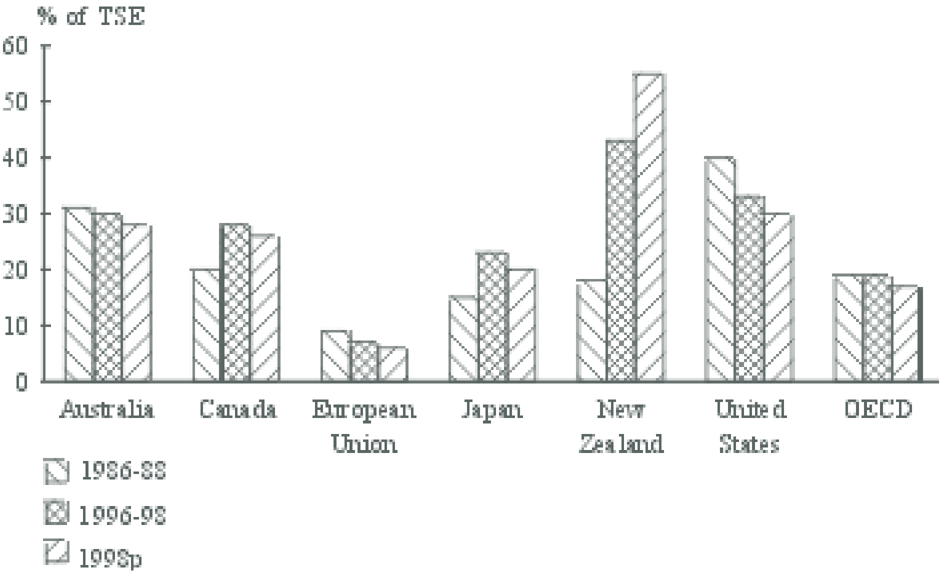

Figure 3.2 General Services Support Estimate (GSSE) by selected OECD countries (percentage of TSE)
Notes: p = provisional; EU-12 for 1986-1988, EU-15 from 1995.
Source: OECD.

The share of TSE for general services provided to agriculture, as measured by the percentage GSSE, ranged from less than 10% in the European Union, to about 30% in Australia, Canada and the US, and to 55% in New Zealand (Figure 3.2).

Expressing the Producer Support Estimate per full-time farmer (Table 3.5) and per hectare agricultural land (Table 3.6), confirm the low levels of support in Australia and New Zealand. The level of support in the European Union equals that in the US, when measured as PSE per full time farmer. However, when expressed per hectare of agricultural land, the support in the US is much lower than in the European Union. In terms of this indicator, the highest level of support is offered in Japan.

Table 3.5 Producer Support Estimate per full-time farmer equivalent in selected OECD countries (1,000 ecu)

Country	1986-1988	1996-1998	1998p
Australia	2	3	3
Canada	11	6	7
European Union	10	14	17
Japan	13	20	19
New Zealand	4	1	0
US	16	12	17
OECD	11	9	10

Notes: p = provisional. EU-12 for 1986-1988, EU-15 for 1998.
Source: OECD, PSE/CSE database.

Table 3.6	*Producer Support Estimate per hectare of agricultural land in selected OECD countries (ecu)*		
Country	1986-1988	1996-1998	1998p
Australia	2	2	2
Canada	69	38	39
European Union	645	687	800
Japan	8,843	9,459	8,786
New Zealand	26	4	2
US	89	73	100
OECD	169	170	187

Notes: p = provisional. EU-12 for 1986-1988, EU-15 for 1998.
Source: OECD, PSE/CSE database.

Over the last decade, Australia, Canada, New Zealand, and the US have had levels of support lower than the OECD average, as measured by producer NAC (Figure 3.3). All of them are net exporters of major agricultural commodities, have a predominance of large farms, and a relatively low share of the workforce in agriculture. Moreover, with a percentage GSSE of around 30%, the share of support to general services provided to agriculture for those countries is the highest in the OECD area, reflecting the relative importance attached to efforts to improve efficiency and productivity at every level of the agro-food chain. In Australia and New Zealand the bulk of the General Services Support consists of research and development. On the other hand in the US, much attention is paid to marketing and promotion (Table 3.7).

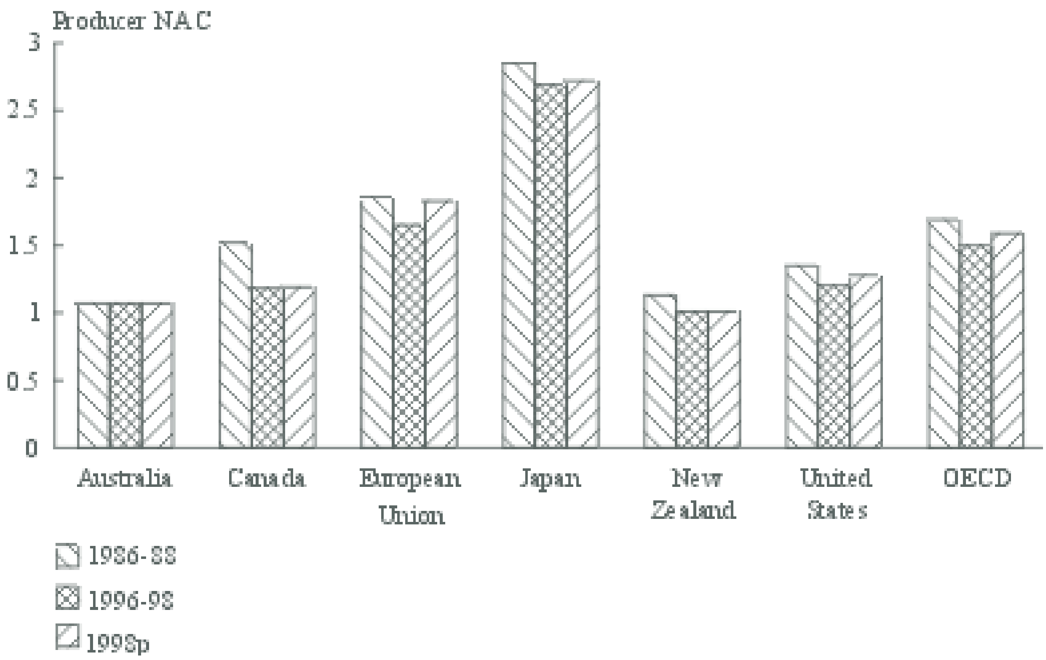

Figure 3.3 *Producer Nominal Assistance Coefficient in selected OECD countries*
Notes: p = provisional. EU-12 for 1986-1988, EU-15 for 1998.
Source: OECD, PSE/CSE database.

Table 3.7 Composition of General Services Support Estimate in OECD and selected member countries, 1998p (percentage share in GSSE)

	Research and development	Agric. schools	Inspection services	Infrastructure	Marketing and promotion	Public stockholding	Other
Australia	75	0	5	17	1	0	2
Canada	23	16	21	21	19	0	0
European Union	22	1	4	24	27	21	1
Japan	4	2	1	75	2	4	12
New Zealand	78	1	21	0	0	0	0
US	7	0	2	2	83	0	5
OECD	*9*	*1*	*3*	*2*	*55*	*5*	*5*

Note: p = provisional.
Source: OECD.

Domestic prices in the countries with a low level of support are in general closely aligned with world market prices as shown by relatively low levels of the consumer NAC (Figure 3.4). In contrast to the countries mentioned above, support to agricultural producers has been above the OECD average in the European Union and Japan over the last decade. But while the level of support to producers in the EU is just above the OECD average, in Japan it is significantly above the OECD average (Figure 3.3). The percentage GSSE is significantly below the OECD average in the European countries, but around OECD average in Japan. These countries grant market price support for most major commodities, and have the highest share of market price support in overall support. This has been reduced to around 50% in the European countries, but remains above 90% in Japan. The relative importance of market price support is mirrored in the levels and changes in the consumer NAC (Figure 3.4).

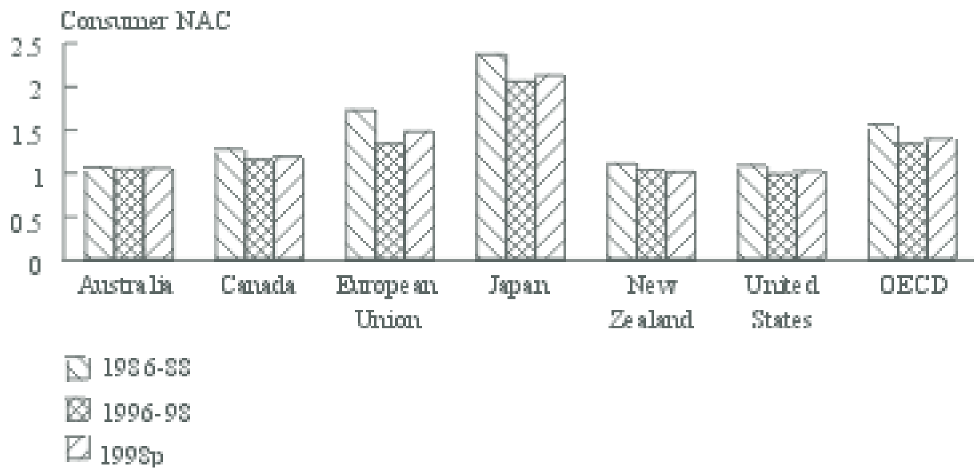

Figure 3.4 Consumer Nominal Assistance Coefficient in selected OECD countries
Notes: p = provisional. EU-12 for 1986-1988, EU-15 for 1998.
Source: OECD, PSE/CSE database.

3.4 Trends in the level of support by commodity

As with countries, there are also wide variations in the levels of support to producers for the major agricultural commodities. From 1986-1988 to 1996-1998, the producer NAC declined for most products, but not for beef and veal, and wool (Table 3.8).

The producer NAC remained the highest for rice in 1996-1998. Rice, milk and sugar are commodities for which market price support continues to be the main source of support in all OECD countries. Consequently, these commodities are those with the highest level of implicit tax on consumption as measured by the consumer NAC by commodity (Table 3.9).

Table 3.8 Producer Nominal Assistance Coefficient by commodity in OECD

	1986-1988	1996-1998	1998p
Wheat	1.96	1.57	1.80
Maize	1.68	1.26	1.39
Other grains	2.14	1.90	2.24
Rice	5.46	3.91	3.81
Oilseeds	1.45	1.23	1.28
Sugar (refined equivalent)	2.02	1.64	1.75
Milk	2.51	2.08	2.35
Beef and veal	1.38	1.45	1.52
Pigmeat	1.23	1.13	1.18
Poultry	1.24	1.11	1.09
Sheepmeat	2.24	2.06	2.08
Wool	1.06	1.08	1.08
Eggs	1.17	1.12	1.14
Other commodities	1.63	1.47	1.53
All commodities	1.69	1.50	1.59

Note: p = provisional.
Source: OECD, PSE/CSE database.

Table 3.9 Consumer Nominal Assistance Coefficient by commodity in OECD

	1986-1988	1996-1998	1998p
Wheat	1.33	1.05	1.11
Maize	0.99	0.91	0.91
Other grains	1.12	1.05	1.06
Rice	5.25	3.89	3.94
Oilseeds	1.02	1.01	1.01
Sugar (refined equivalent)	2.74	2.03	2.09
Milk	2.45	1.92	2.21
Beef and veal	1.34	1.25	1.29
Pigmeat	1.28	1.11	1.17
Poultry	1.23	1.06	1.04
Sheepmeat	2.08	1.17	1.26
Wool	1.01	1.03	1.03
Eggs	1.16	1.10	1.11
Other commodities	1.65	1.41	1.47
All commodities	1.56	1.34	1.40

Note: p = provisional.
Source: OECD PSE/CSE database.

3.5 Conclusions

In 1996-1998, the share of the European Union in agricultural support in the OECD area, as measured by the Total Support Estimate, amounted to 37%, against 25% for the US, and 19% for Japan; on the other side of the spectrum, the shares of Australia and New Zealand in total agricultural support are below 1%. For the same period, total agricultural support as a percentage of GDP in these countries range from 0.24% in New Zealand, 0.49 in Australia, 1.05% in the US, 1.14% in the European Union, to 1.57% in Japan. Also in relation to the area of agricultural land, agriculture in Japan receives the highest support, far more than agriculture in the other countries. Only in relation to agricultural employment, support in Japan is not much higher than in the European Union and the US.

The major trends in support since 1986-1988 can be summarised as follows:

- the share of total agricultural support in GDP has been on the decline. However, in 1998 support rose again, due to the sharp fall in world market prices this year;
- what concerns the financing of agricultural support, some substitution of the consumer contribution by the taxpayer contribution has occurred, especially in the European Union;
- support to general services provided to agriculture has shown stability; the relative importance of general services in agricultural support is low in the European Union, but high in the US, Canada, Australia, and New Zealand; these are net exporter countries with low levels of support;
- although there have been reductions in the share of market price support, it remains the main source of support; in Japan the share of market price support has even risen slightly from 90% in 1986-1988 to 91% in 1996-1998; the reductions in the European Union have largely been offset by an increase in support based on area planted or animal numbers; payments in the US based on area planted have been replaced by historic entitlements;
- the share of support based on input use is rather stable, with an increase in the share of support based on input constraints, including environmental constraints; despite significant increases in some countries, this share has remained rather low;
- the share of support based on overall farm income is low, but is still significant in Australia and has risen sharply in Canada; this form of support is least coupled to production of commodities;
- in general, the majority of support to producers still comes from support based on output, area planted or animal numbers. However, some payments have limits attached to the levels of output, area or animal numbers that attract the support, or are associated with environmental constraints.

4. WTO constraints

4.1 Introduction

Under the Uruguay Round Agreement for Agriculture (URAA), countries agreed to substantially reduce agricultural support and protection by establishing disciplines in the areas of market access, export subsidies, and domestic support. In addition, there has been established an Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) to prevent countries from using arbitrary and unjustified health and environmental regulations as barriers to trade. The URAA is implemented over a 6-year period, from 1995 to 2000. As part of the URAA (Article 20), countries agreed to start negotiations for a continuation of the agricultural trade reform process by the end of 1999.

The WTO disciplines make up the latitude of a member state's current and future agricultural policy. Hence, this chapter gives a broad outline of the framework of WTO provisions, where within policy instruments are to be put into effect. Firstly, the market access provisions will be dealt with, and subsequently export subsidies and domestic support. Finally, the agenda of the new trade negotiations, the so-called 'Millennium Round', will be considered.

4.2 Market access

The market access provisions of the URAA consist of two parts: 1) tarrification and 2) minimum and current access provisions. Tarrification implies that non-tariff barriers are to be converted into tariff equivalents equal to the difference between internal and external prices existing in the base period, which has been set at 1986-1988. All tariffs are to be bound, which means that they cannot be increased above the maximum level without notification and compensation. Subsequently, tariffs are to be reduced by 36% on average (with a minimum of 15%), in six equal terms. However, tariffs remained high after the tariffication and the following reduction in tariffs. To ensure that historical trade levels were still maintained and to create some new trade opportunities, minimum and current access provisions have been introduced.

Minimum access provisions imply that minimum access opportunities are to be provided for products subject to tariffication with imports below 5% of domestic consumption in the base period. Furthermore, countries must maintain current access opportunities equivalent to those existing in the base period. To ensure that these access opportunities are offered, countries will establish tariff-rate quotas (TRQs), subject to a low duty of imports. Imports above that amount are subject to the tariff established through tariffication. Minimum access quotas have to be increased from 3 to 5% of domestic consumption during the implementation period.

For products subject to tariffication, countries can put a special temporary agricultural safeguard mechanism (or Special Safeguard Clause) in place. This mechanism, applying additional levies, can be used when an increase in imports or a drop in price of imports exceeds certain trigger levels. In this way, world market prices and import quantities are prevented from large fluctuations.

4.3 Export subsidies

Export subsidy commitments of the URAA imply a reduction of a country's volume of subsidised exports by 21% and a reduction of the value of export subsidies by 36% between 1995 and 2000 (see Box 4.1 for the definition of export subsidies). Although with some exceptions, the base period has been set at 1986-1990.

Box 4.1 The definition of export subsidies in the URAA (based on article 9)

According to the URAA, export subsidies are defined as follows:

- the provision by governments of direct subsidies, including payments-in-kind, to (groups of) producers, contingent on export performance;
- the sale or disposal for export by governments of non-commercial stocks of agricultural products at a price lower than the comparable price charged for the like product to buyers in the domestic market;
- payments on the export of an agricultural product that are financed by virtue of governmental action, including payments that are financed form the proceeds of a levy imposed on the agricultural product;
- the provision of subsidies to reduce the costs of marketing exports of agricultural products (other than widely available export promotion and advisory services) including costs of transport and processing;
- internal transport and freight charges on export shipments, provided or mandated by governments, on terms more favourable than for domestic shipments;
- subsidies on agricultural products contingent on their incorporation in exported products.

For each country, reduction commitments are specified in a schedule, which contains 22 groups of agricultural products, among which a group of processed goods. Countries may not initiate subsidies for commodities that are not included in their schedule. If a country under-utilises its commitment in any year, it can add the excess commitment quantity or value to the next year's commitment. However, this does not apply to the last year of implementation. Food aid is exempted from the URAA disciplines on export subsidies.

4.4 Domestic support

WTO member countries agreed to limit domestic support, as some of the policy measures are regarded to have effects on production and thus trade. In the discussions leading up to the URAA, domestic support policies have been distinguished into three main categories, to indicate the relative acceptability of the policies. This concerns the amber box, blue box, and green box policies.

<table>
<tr><td rowspan="5">Total

Support</td><td>All other amber support</td><td>Reduction Commitment</td></tr>
<tr><td>Product-specific de minimis</td><td rowspan="2">Ceiling</td></tr>
<tr><td>Non-product-specific de minimis</td></tr>
<tr><td>Blue box</td><td rowspan="2">Exempt criteria (No ceiling)</td></tr>
<tr><td>Green box</td></tr>
</table>

Figure 4.1 The structure of domestic support commitments in the URAA

Box 4.2 The development of the AMS concept

When the Uruguay Round was launched in 1986, it was agreed to develop an Aggregate Measure of Support in order to provide transparency in the wide range of different existing policies and to bring them under one denominator. According to the EU, the AMS should be the sole basis for reduction commitments. The PSE concept was chosen as a basis for the discussion, as the PSE captures the effects of many different policies and is calculated rather easy by using price gaps and budgetary expenditure data. Moreover, for many countries calculations of PSEs were already available through the work of the OECD. However, the approach proved to have some technical and political problems. PSE levels are only partly under a country's control, and PSEs do not adequately reflect trade distortions. Furthermore, the aggregated approach faced problems, like the choice of the reference price, the commodity coverage, and the country coverage. The use of the AMS as agreed upon in the final URAA were a compromise between the positions of the different contracting parties. To overcome most of the problems of the initial PSE-based AMS, the application area of the final AMS was slimmed down to policies in the internal support area. Measures with no or a negligible effect on trade were excluded from the AMS concept. For market access and export support, separate and more restrictive WTO commitments were agreed upon (Silvis and Van der Hamsvoort, 1996).

In the final agreement, only the domestic policies deemed to have the largest effect on production and trade (amber box), were subjected to limitations. In general, these policies provide economic incentives to producers to increase current resource use or current production ('coupled' incentives). In accordance with the *'de minimis clause'*, product-specific or non-product-specific domestic support is excluded from reduction commitments ' which does not exceed 5% of a Member's total value of production of a basic agricultural product or otherwise the Member's total agricultural production during the relevant year'. The support to be reduced, is quantified by the Aggregate Measure of Support (AMS) (see Box 4.2). The AMS has to be reduced by 20% from 1995 to 2000, in comparison with the base period level (1986-1988).

Box 4.3 URAA criteria for the green box

Domestic support measures for which exemption from the reduction commitments is claimed, green box policies, shall meet the fundamental requirement that they have no, or at most minimal, trade-distorting effects or effects on production. Furthermore, the support in question shall be provided through a publicly-funded government programme, not involving transfers from consumers; and the support in question shall not have the effect of providing price support to producers. Such (green box) policies include:

- general services (research; pest and disease control; training services; extension and advisory services; inspection services; marketing and promotion, excluding expenditure for unspecified purposes that could be used by sellers to reduce their selling price of confer a direct economic benefit to purchasers; infrastructural services);
- public stockholding for food security purposes;
- domestic food aid;
- direct payments to producers (based on the green box criteria);
- decoupled income support (Eligibility for such payments shall be determined by clearly-defined criteria such as income, status as a producer or landowner, factor use of production level in a defined and fixed base period. The amount of such payments shall not be related to or based on the type or volume of production, prices, or factors of production employed in any year after the base period);
- government financial participation in income insurance and income safety-net programmes, based on various criteria (Annex 2 of the URAA; see also section 5.5 of this report);
- payments (made either directly or by way of government financial participation in crop insurance schemes) for relief from natural disasters;
- structural adjustment assistance, based on various criteria (Annex 2 of the URAA);
- payments under environmental programmes: eligibility for such payments shall be determined as part of a clearly-defined government environmental or conservation programme and be dependent on the fulfilment of specific conditions under the government programme, including conditions related to production methods or inputs; and he amount of payment shall be limited to the extra costs or loss of income involved in complying with the government programme;
- payments under regional assistance programmes: eligibility for such payments shall be limited to producers in disadvantaged regions on basis of neutral and objective criteria and not on the basis of contemporary circumstances (for other criteria see Annex 2 of the URAA and section 5.11 of this report).

Blue box

The second category of domestic support measures concerns the blue box policies. To accommodate the US and the EU and to bring the negotiations to a conclusion, countries agreed to redefine some amber box policies. Support measures placed in the blue box, concern amber box payments related to production limiting programmes. The blue box is viewed as a special temporary exemption category for the 1995-2000 period. Payments can be placed in the blue box if the amount of payments is based on a fixed area and fixed yields, or a fixed number of livestock, or if they are based on no more than 85% of the base level of production. Examples of blue box policies are the compensatory payments of the EU and the (former) deficiency payments of the US.

Green box
The third category of domestic support is the green box. These policies are considered to have the smallest potential effects on production and trade. Hence, these policies are exempted from support reduction commitments. Broadly speaking, there are four categories of green box policies provided for by the URAA (Swinbank, 1999):
- Income support payments that are totally decoupled from production;
- public stockholding for food security services and domestic food aid;
- a variety of support measures for the farm sector, such as the provision of general services;
- payments under environmental and regional assistance programmes.

More specific criteria for the green box are presented in Box 4.3.

4.5 The agricultural liberalisation agenda

In Article 20, the URAA mandated new negotiations before the end of 1999, in order to continue the agricultural liberalisation process. The new negotiations will probably start from the disciplines agreed in the Uruguay Round and will improve them by strengthening the rules and making further reductions. However, the positions of the EU, US, Canada, New Zealand and Australia vary widely. Only the standpoints of the US and Canada are somewhat aligned with each other as well as the points of view of New Zealand and Australia. New Zealand and Australia want to get rid of the current unique position of agriculture in the WTO. For the EU, the objectives described in the first section of this report are leading, which imply special attention for *non-trade concerns*. The following remarks focus on the traditional liberalisation agenda.

Market access
Most of the WTO members are favourably disposed towards a further reduction of tariffs. Nevertheless, it is questionable whether the EU, Canada and the US are willing to significantly reduce tariffs of 'sensitive' products, such as sugar and dairy. It is likely that the EU is willing to lower tariffs modestly but probably only through a sector by sector approach. The US principally want to reduce the highest tariffs, but also through a sector by sector approach. The Canadian view on market access is unclear. Canada will probably resist too drastic a reduction in tariffs, as these are particularly high for Canada (Josling and Tangermann, 1999). Conversely, Australia and New Zealand want to lower *all* the tariff peaks.

Lowering tariffs is not the only way to increase trade. For commodities subject to Tariff Rate Quotas (TRQ), expanding the quotas might have more impact on trade. The quota volumes as a percentage of the domestic consumption could be raised or the within-quota tariffs could be further decreased. Furthermore, the administration of the TRQs could be improved, as the administration of the current TRQs has become a major problem in agricultural markets. After all, licensing procedures of TRQs are involved with a great deal of governmental interference. Moreover, TRQs have provided a playground for rent-seeking traders, who in turn have acquired an incentive to lobby for the continuation of high above-quota tariffs (Josling and Tangermann, 1999). Most of the countries considered in this study are willing to regularise the TRQ administration and to expand TRQs. Only the EU wants to expand them cautiously. The opinions on the safeguard mechanism differ more sharply. Whereas the US, Canada, New Zealand and Australia want to eliminate the safeguards, the EU wants to keep them.

Export subsidies
On export subsidies, New Zealand and Australia will try to negotiate a complete elimination in the next Round. The US and Canada are perhaps a little more cautious on the abolition of export subsidies. The EU, by far the largest export subsidiser, continues to rely on export subsidies to clear markets, at least for the next few years. Therefore, the EU will only agree with a modest reduction of export subsidies. On the other hand, the EU wants to bring export credits and State Trading Enterprises (STEs) up for discussion. Export credits are among others used by the US. Like the EU, New Zealand and Australia want to abolish the use of export credits, whereas the US are probably willing to only limit them somewhat. Since Canada and New Zealand use STEs, these countries would have difficulties agreeing with an abolition of export monopolies. The US on the other hand, would like to bring them up for discussion.

Domestic support
Of the partners regarded, the EU is the only one defending the maintenance of the blue box. If this would prove to be unrealistic, the EU could change its own compensation policies without too much inconvenience to make them compatible with the green box. However, the size and composition of the green box could be an issue during the next negotiations. The US as well as New Zealand and Australia will push for the elimination of the blue box. Furthermore, they likely want to sharpen the criteria for the green box policies. On the issue of further AMS reductions, the US could differ from New Zealand and Australia. Recent sharp drops in prices and natural disasters in the US have led the US Congress to raise support to farmers.

5. Agricultural support in the US

5.1 Introduction

In 1996 the US have had a major reform of their agricultural policies. One of the intentions of the 1996 Farm Bill was to create more market-oriented government programmes (USDA, 1996a). The most significant aspect of the 1996 Farm Bill, which became law in April 1996, was the introduction of farm support decoupled from farm production and abolishment of Acreage Reduction Programmes. Furthermore, the Bill aimed at putting resources into rural development and extending conservation and environmental programmes and to make them simpler and more workable for agriculture. Besides these more or less new aspects, many of the earlier programmes were maintained.

The US have a wide range of agricultural assistance measures to provide a safety net for farmers, support agricultural prices and incomes, and to help farmers manage their risks. To give an impression of the relative importance of the various support measures, the next section (section 5.2) shortly describes the composition of total financial assistance to agriculture. Next, the different categories of support are described (USDA, 1996b):

- price support and direct income payments (section 5.3);
- natural disaster assistance (section 5.4);
- risk management programmes (section 5.5);
- export support (section 5.6);
- conservation policy (section 5.7);
- foreign food aid and domestic nutrition assistance (section 5.8);
- marketing and regulation (section 5.9);
- credit and loan support (section 5.10);
- rural development support (section 5.11);
- research, extension and education (section 5.12).

This overview is focussed on the federal programmes. On the level of the States, support is given in research, extension and education (see 5.12) and marketing. Each state has its Department and Commissioner for Agriculture and its Land Grant Universities.

5.2 Financial assistance

In terms of the gross value of total USDA assistance, food and nutrition programmes form the most important element of the US agricultural policies, whereas commodity support programmes are placed second (Figure 5.1). Hence, the composition of agricultural assistance in the US differs quite strongly from that in the EU and most other OECD countries. Food and nutrition programmes play a less important role in most of the other countries. In most countries, needy people receive financial assistance instead of help in kind. Such assistance is included in the social security system of most OECD countries.

The programmes of the Foreign Agricultural Service account for a significant share (7%) of total assistance to agriculture as well. These programmes include marketing and promotion of US's agricultural products at markets abroad. Marketing and promotion is the largest category of 'general service support' in the US (Table 3.7). At the same time, none of the other OECD countries devotes such a large percentage of general service support to export marketing and promotion than the US do.

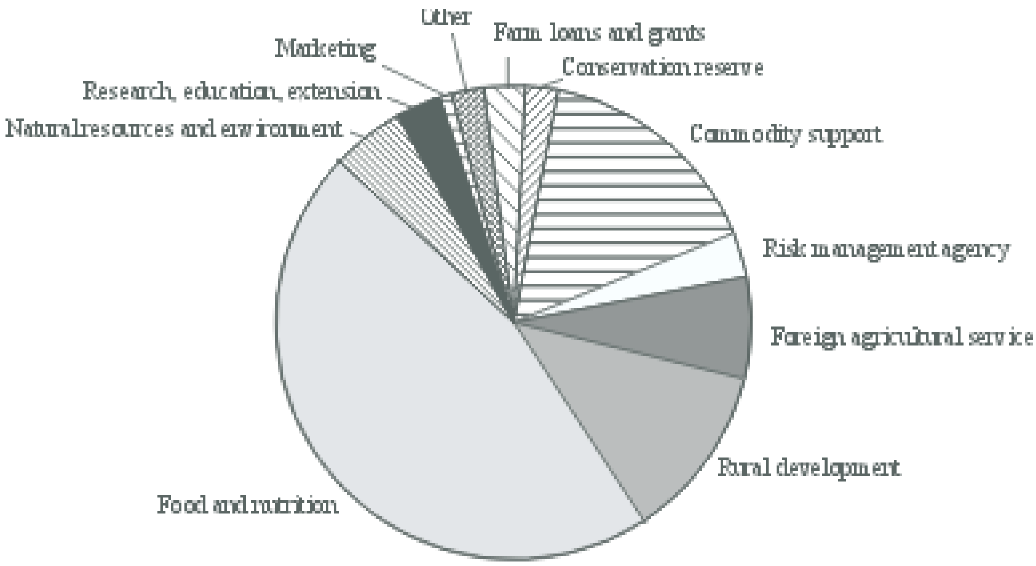

Figure 5.1 Composition of the gross value of all USDA's agricultural financial assistance to the public
Source: USDA, 1999.

5.3 Price and direct income support

5.3.1 Introduction

Price support programmes are handled primarily through loan and purchase programmes. Import restrictions are used also to keep domestic prices at certain levels, in particular for sugar and dairy. However, we will not further discuss import measures such as tariffs, technical trade barriers, and tariff quotas in this chapter (see chapter three).

The Farm Bill of 1996 aimed at a gradual abolishment of market price support. But in practice the opposite has happened, because of sharply falling world market prices for cereals and soybeans. The maximised loan rates (level 1996) therefore regained significance. Since the 1996 Farm Bill, direct payments such as the production flexibility contract payments have been increased by Congress with 50 to 100%. Additional payments have also been made as natural disaster payments and for conservation programmes. These types of income support will be dealt with in section 5.4 and section 5.7 respectively.

Most of the policies with regard to domestic price and income support are financed by the Commodity Credit Corporation (CCC). The CCC supports agricultural prices and incomes through loans, purchases, payments and other operations, and makes available materials and facilities required in the production and marketing of agricultural commodities. The CCC programmes are administered by the Farm Service Agency (FSA) of the United States Department of Agriculture (USDA). The CCC is authorised to finance transport, storing processing, and disposing of various agricultural products.

The total CCC programme level for the 1999 budget amounts to nearly 21.5 billion USD, of which commodity programmes account for 14.1 billion USD. Price support through commodity loans is still of great significance (Table 5.1). In fact, price support has risen in importance, as the programme level for price support loans has been increased by more than USD 1 billion in 1999. Loan deficiency payments alone amounted to more than 6.5 billion USD in 1999.

Table 5.1 The gross value of financial assistance of USDA/CCC commodity programmes (in million USD)

	1998	1999
Price Support Loans	6,408	7,451
Production Flexibility Contracts	5,719	5,512
Cotton User Marketing Payments	204	140
Noninsured Assistance Payments	69	80
Disaster Assistance	15	4
Purchases and Sales	588	526
Interest Expenditures	168	221
Other	144	179
Total, Commodity Programmes	13,315	14,113

Source: USDA, 1999.

5.3.2 Price support

Nonrecourse loans

To stabilise market prices and market supplies and to provide farmers with interim finance, there are several commodity loan programmes. *Nonrecourse marketing assistance loans* are mandated for the 1996-2002 crops of wheat, corn, barley, grain sorghum, oats, upland cotton, extra-long staple cotton, rice soybeans, sunflower seed, canola, rapeseed, safflower, mustard seed, flaxseed, tobacco, peanuts, extra-long staple cotton, raw cane sugar and refined beet sugar.

To receive a loan, producers must comply with certain conservation and wetland requirements and producers must have entered into a production flexibility contract (for wheat, feed grains, rice and cotton). Any production of a contract commodity by a producer who has entered into a production flexibility contract is eligible for loans. *Loan rates* are prices at which producers can hand their produce over to the Commodity Credit Corporation (CCC), obtaining so-called nonrecourse loans. Commodity loan rates are based on a moving average of past market prices and are calculated as 85% of the simple average of market prices for the preceding five-year period, excluding the years with the highest and the lowest market price. According to the Farm Bill of 1996 the loan rates reach their maximum level in 1996. The value of the loan is the product of the announced loan rate and the quantity placed under loan.

Nonrecourse loans allow producers to pay their bills and other loan payments when they come due, without having to sell crops at a time of year when prices are at their lowest. Farmers can reclaim the produce later if prices improve. Then, when conditions are more favourable, farmers can sell the crop and pay off the loan and a certain fee for administration costs and interest. If the prevailing price of the crop remains below the loan level set by the United State Department of Agriculture (USDA), farmers can keep the loan proceeds and give the crop to the CCC instead. Hence, these loans are called 'nonrecourse': producers can forfeit or deliver the commodity to the CCC to discharge the loan in full.

Recourse loans

Like nonrecourse loans, recourse loans are aimed at suppressing seasonal fluctuations in agricultural prices and incomes. For sugar, there are both nonrecourse loans and *recourse loans*. Nonrecourse loans are provided when imports exceed 1.5 million tons. But producers pay a penalty of about one cent per pound if they forfeit the produce. When nonrecourse loans are in effect, processors are required to pay eligible producers a minimum price for sugarcane or sugar beets delivered for processing. If sugar imports are less than 1.5 million tons, sugar loans are *recourse*, which means that borrowers cannot necessarily discharge their debts in full by simply forfeiting the commodity to the government. In other words: recourse loans must be repaid. In this case, the risk of government costs is virtually eliminated.

For some other commodities such as honey and mohair there have been recourse loans as well. These recourse loan programmes do not necessarily have to apply for several years. In some cases, recourse loans can only be obtained for a single year.

Quota price support

For peanuts and tobacco, 'quota price support' acts as a 'floor' under the market. Price support through loans for the marketing quota crops tobacco and peanuts is made available through producer loan associates. By law, these programmes must operate at no-net-costs to the United States Treasury. This objective must be achieved by bringing supply and demand into closer balance, by increasing the assessments (charges paid by producers and processors) on quota and additional peanuts, and by increasing assessments on quota peanuts for specific area quota pools to cover losses in those pools. Regional producer associations keep records of quota and additional marketings, arrange warehousing for CCC loan commodities, and operate the price support loan programme. To get the support price, a peanut grower places peanuts in storage arranged by the regional association. Once this is done, the producer no longer has control of the peanuts. They are part of the pool controlled by the association and the CCC. Growers are eligible for dividend payments if association revenues from selling the peanuts in the pool exceed the loan and related costs of the peanut programme. But, if other regional pools experience losses from pool operations, profits made in one pool may be used to offset the losses of the other pools. The loan rate for quota peanuts is held constant from 1996 to 2002, at about 10% below the 1995 loan level. The loan level for additional peanuts is set at a level that ensures no losses by the CCC.

Price support for dairy

Initially, the implementation of the 1996 Farm Bill for dairy meant a three-year extension of the price support and then an elimination of it. This means that surpluses could no longer be purchased by the CCC from 2000 onwards. However, towards the end of 1999, The US Congress has revised its earlier decision. Consequently, the system of intervention and guarantee prices for cheese, butter and dried milk has been extended by two years. For price formation of milk, the FMOs are also relevant (see Box 5.1).

Box 5.1 Federal Marketing Orders

Prices of milk and a few other commodities (such as fruit and vegetables) are regulated through marketing orders and marketing agreements. Marketing orders differ from marketing agreements. Marketing orders are binding on all individuals and businesses who are classified as 'handlers' in a geographic area covered by the order (USDA/AMS, 1999). Marketing agreements are binding only on handlers who are voluntary signatories of the agreement. Marketing orders and agreements can be applied for several purposes: (1) maintaining the high quality of a product; (2) standardising packages and containers; (3) establishing reserve pools for storable commodities; (4) regulating the market supply; and (5) authorising production research, marketing research and development and advertising. By regulating supply and demand prices are influenced.

For fruit and vegetable products there are marketing orders and marketing agreements to help stabilise market conditions. These programmes, under the umbrella of the Agricultural Marketing Service (AMS) are designed to assist farmers in allowing them to collectively work to solve marketing problems. Industries voluntary enter into these programmes and choose to have Federal oversight of certain aspects of their operations. In 1999, there were 36 active marketing agreements and other programmes as well as an additional programme for peanuts, which collects assessment fees from handlers to cover operation and administrative costs of the programmes.

For dairy, the Federal Milk Marketing Order (FMMO) system is used to control prices of fluid milk. The FMMO determines the minimum prices that handlers in the marketing area must pay for different classes of milk. Producers then receive an average (blend) price for all the milk marketed in the marketing area, regardless from whether their milk is processed into fluid milk, cheese, butter or whatever. In practice, this system implies a financial transfer from consumers of fluid milk (high-value dairy product) towards consumers of cheese (a low-value dairy product), imposed by the government.

Simultaneously, six of the north-eastern States have created their own system of fixed fluid milk prices, the so-called 'North-Eastern dairy compact'. In these States, a fixed guarantee price for fluid milk is set which is above the level guaranteed by the FMMO. This price level is maintained by cartelising the milk trade in these States and by imposing levies on imported milk from other States. The 1996 Farm Bill reduced the number of milk marketing orders from 31 to 11 from 1999 onwards. The North-Eastern dairy Compact has towards the end of 1999 been extended by two years from the year 2000 onwards.

Loan deficiency payments

A Loan Deficiency Payment (LDP) is a one-time amount an eligible producer can collect that is *not* put under a 9-month (FSA) non-recourse marketing loan. Producers may take out a 9-month loan *or* apply for an LDP, but not both, on that quantity. Producers who are enrolled in an FSA Production Flexibility 7-year Contract (PFC) are eligible for LDPs on contract commodities, including wheat, corn, grain sorghum, barley and oats. In addition, all soybeans and minor oilseeds are eligible. Rice and upland cotton also have LDP programmes, under separate regulations. ELS cotton is not eligible for LDP compensation.

Except for extra-long staple cotton, loan deficiency payments may be made available to producers of loan commodities who, although eligible to obtain a marketing assistance loan, agree to forgo obtaining the loan for the commodity in return for a loan deficiency payment. Loan deficiency payments are calculated by multiplying the loan payment rate for the loan commodity by the quantity of the loan commodity that the producer is eligible to pledge as collateral for a loan. CCC is not obtaining, holding or securing the commodity in case of a loan deficiency payment. Loan deficiency payments are simply cash payments and represent the last of the 'safety net' type programmes left in the wake of the Freedom to Farm provisions of the 1996 Farm Bill.

An LDP rate is equal to the amount, if any, by which a posted county price (PCP) is *below* the designated county loan rate on a specific date. There are two different types of LDP's. A measured LDP can be requested after grain has been harvested and put into storage, but producers must retain 'beneficial interest' at the time of harvest which means farmers have control over the commodity, risk of loss, and title to the commodity. Thus, grain that has already been sold or delivered to a buyer is ineligible. A second type, the Direct-Sale LDP must be filled out prior to harvest if producers plan to sell corn from the field. Since the direct agreement locks a producer to the rate in effect on the date of delivery to the buyer, the Measured LDP is preferred. The Measured LDP allows the producer to watch the market and request the LDP when the difference between loan rate and posted county price is at its greatest.

5.3.3 Direct income support

Production Flexibility Contracts

The 1996 Farm Bill removed for some commodities the link between income support payments and farm prices by providing for a one-time sign-up for a Production Flexibility Contract whereby producers receive seven annual fixed but declining production flexibility contract payments through 2002. Producers who have participated or had certified acreage in the eligible wheat, corn, sorghum, barley, oats, upland cotton and rice programmes in any year of the five years before 1996, may sign a Production Flexibility Contract. These 7-year contracts will end in 2002. Producers who enter into this programme will receive an annual payment (with the option of receiving two times a year half of the payment) if they (continue to) comply with certain conservation and wetland protection requirements, with the planting flexibility requirements, and if they use the contract acreage for an agricultural or related activity (see USDA, 1996b and USDA, 1996c). Any crop may be grown on contract acreage except for fruits and vegetables (apart from some exceptions). Furthermore, it is important to mention that total production flexibility contract payments cannot exceed the limit of USD 40,000 per person.

Supplemental payments in reaction to adverse income developments

In case of disasters, emergencies, economic crises or adverse income developments, the Congress can authorise USDA to use supplemental funding to provide additional payments to farmers. In this section some recent examples of additional income support in case of unfavourable market conditions are described.

In 1998 and 1999, Congress has allocated additional budget for the Production Flexibility Contract Payments (these were increased by 50-100%). Another additional programme in reaction to unfavourable income developments is the *Small Hog Operation Payment (SHOP) programme*. Producers could receive cash payments under this programme if their hog operation marketed fewer than 2,500 hogs during the last six months of 1998 and was still in operation when the programme was launched. A producer was not eligible for payments if his hogs were marketed under cost-plus or fixed-price contracts or if his gross income exceeded USD 2.5 million in 1998. Producers were paid up to USD 10 per slaughter-weight hog for a maximum of 500 hogs under the second SHOP programme. Two SHOP programmes have been launched in 1999, of which the first one in the beginning of 1999 provided total payments of about USD 50 million.

For dairy farmers facing greatly reduced milk prices, there has also been additional assistance. Under the Dairy Market Loss Assistance Programme there has been USD 200 million available for dairy producers in 1999. Producers may apply for these direct cash payments if their milk was marketed commercially in the US anytime during the fourth quarter of 1998. Producers may receive a direct payment per hundredweight (cwt) on the first 26,000 cwt for milk marketed commercially during the 1997 or 1998 calendar year.

5.3.4 WTO compatibility of price and direct income support

Most of the agricultural assistance measures described in this section, can be classified as amber box policies. In principle, these are subject to reductions. This applies to market price support, marketing loans, and loan deficiency payments. On the other hand, payments under Production Flexibility Contracts (PFC) are regarded green box policies, as they are supposed to have no or only minimal effects on production and trade. After all, PFC payments are provided through a publicly-funded government programmes and they do not involve transfers from consumers. Next to this, PFCs meet the second important criterion for exemption of reduction commitments, i.e. that they shall not have the effect of providing price support to producers. However, the position of additional PFC payments which have been introduced after 1997 is not clear. These policies used to be rather unimportant: in 1995, amber box policies accounted for only 10% of total domestic support policies in the US, as opposed to 54% in the European Union (USDA/ERS, 1998). Because of the supplemental financial assistance, the amber box policies have become much more important recently.

5.4 Natural disaster assistance

5.4.1 Introduction

Farmers who have suffered a loss due to a natural disaster, may be eligible for assistance under one of the natural disaster assistance programmes of the Farm Service Agency (FSA). In 1998 and 1999 this type of ad hoc and ex-post income payments has become increasingly important. Hence, total payments based on output, area planted, and historical support have been increased recently.

5.4.2 Emergency Conservation Programme

One of the natural disaster assistance programmes is the Emergency Conservation Programme (ECP). ECP contributes towards the costs of rehabilitating farmlands damaged by natural disaster. During severe drought, ECP also provides emergency water assistance. To receive ECP assistance the applicant must have suffered a natural disaster that created new conservation problems that affect the land's production capacity if left untreated. Conservation problems that existed before the natural disaster are not eligible for cost-sharing assistance. The assistance can for example be used for debris removal, fence restoration and water conservation measures.

5.4.3 The Noninsured Crop Disaster Assistance Programme

The Noninsured Crop Disaster Assistance Programme (NAP) is for crops for which crop insurance is not available. Crops that are eligible for NAP are crops grown for food and livestock consumption, crops grown for fibre (except for trees) and speciality crops like aquaculture, floriculture, and ornamental nursery. To be eligible, farmers have to provide certain crop information to the FSA annually, before a disaster occurs. Farmers also have to keep certain farm records (production, acreages, crop damage) up to date throughout the year. NAP becomes available when natural disaster causes production losses that are greater than 35% of an eligible crop over a geographic area defined by FSA. In addition, there are some criteria regarding the eligible geographic area and the minimum amount of producers affected by the disaster. Payments under NAP to any person cannot exceed USD 100,000 per crop. Farmers cannot receive assistance for the same loss under more than one programme of the federal government, apart from exceptions. The extent of a loss is determined by using historic production data.

5.4.4 Emergency loan assistance

When counties are declared disaster areas, farmers could be eligible for low-interest loans to help cover production and physical losses. To receive these loans, producers have to operate at family farms, have adequate training or experience in managing and operating a farm and have collateral to secure the loan. The loan limit is up to 80% of actual production (value) loss, or 100% of the actual physical losses (losses to buildings, machinery, orchard trees etcetera), with a maximum of USD 500,000. Borrowers may be required to participate in a financial management training programme, and may be required to obtain crop insurance.

5.4.5 Livestock Assistance Programme

The Livestock Assistance Programme (LAP) provides direct payments to eligible livestock producers who suffered grazing losses due to natural disaster during 1998. Eligible farmers have suffered a loss of 40% or more of grazing for a period of 90 consecutive days. Eligible livestock are beef and dairy cattle, buffalo, sheep, goats, wine and equine animals used commercially for human food or kept for the production of food or fibre on the owner's farm. To be eligible, livestock must be owned for at least three months. In addition to this, eligible producers must fulfil some supplementary conditions.

5.4.6 American Indian Livestock Feed Programme

The American Indian livestock Feed Programme (AILFP), launched in 1999, wants to provide emergency financial feed assistance to livestock owners on tribal-governed land affected by a natural disaster. Tribal governments can apply for assistance when they determine that a livestock emergency exists. This could be the case when a natural disaster causes more than a 35% reduction in the feed production in a certain region for a defined period.

5.4.7 Ad-hoc disaster assistance

In addition to the above-mentioned disaster assistance programmes, the Farm Service Agency has provided ad-hoc disaster aid in 1998 and 1999, thanks to budget allocations by the US Congress. As a result of natural disasters, farmers were eligible for emergency compensation either for single-year or multi-year losses suffered to the crop. The single-year crop loss disaster assistance programme included all crops: insured, uninsured and noninsurable crops. Farmers could be compensated if their losses exceeded 35% of historic yields. For farmers with insured crops a larger percentage was compensated. Under the multi-year provision only insured and noninsurable crops could be compensated. For insured crops farmers were compensated with an additional payment equal to 25% of insurance claim payments made during that period. As a condition of receiving benefits under this programme, producers who did not insure 1998 crops are required to buy crop insurance in 1999 and 2000 for all insurable crops of economic significance.

5.4.8 WTO compatibility of natural disaster assistance

Disaster assistance is exempted from domestic support commitments if it meets the following criteria (see Annex 2 of the URAA):

- eligibility for disaster assistance shall arise only following a formal recognition by government authorities that a natural or like disaster (including disease outbreaks, pest infestations, nuclear accidents and wars) has occurred; and shall be determined by a production loss which exceeds 30% of the average of production in the preceding three-year period or a three-year average based on the preceding five-year period, excluding the highest and lowest entry;
- payments made shall be applied only in respect of losses of income, livestock, land or other production factors due to the natural disaster in question;
- payments shall compensate for not more than the total cost of replacing such losses and shall not require or specify the type or quantity of future production;
- payments made during a disaster shall not exceed the level required to prevent or alleviate further loss as defined in the second criterion.

Since the disaster assistance programmes described in this section meet the exemption criteria, they are regarded as green box policies. Green box policies are considered to have no direct effect on production decisions. However, any policy that transfers income to producers could conceivably have some effect on production by reducing financial risks. If a producer in a risky area regarding natural disasters receives assistance whenever there is disaster, the producer's decisions will probably be different from the situation in which he has to bear the risk himself.

5.5 Crop insurance programmes

5.5.1 Introduction

Coping with risks regarding the uncertainty of weather, government policies, prices, yields, and other factors, is inherent to farming. Risk management means choosing among alternatives to reduce the adverse effects of these uncertainties on the welfare of those depending on the farm for what 'matters' to them (USDA/ERS, 1999). With the shift towards a policy aimed at less government intervention in agriculture following the 1996 Farm Bill, the need for a better understanding of farm risk and risk management was recognised. Natural and economic events in 1998 and 1999, which caused financial reverses for many farmers, reinforced the need to provide farms with tools to successfully manage their own risks. Farmers who were affected by adverse events in many cases were assisted by one-time income and disaster-based payments, as alternative programme and policy tools were not available or practical for the situation. Hence, agricultural policymakers are addressing the issue of risk management, in order to develop a longer-term risk management policy.

5.5.2 Risk Management Agency programmes

The administration of US crop insurance programmes
USDA's risk management programmes are administered by the Risk Management Agency (RMA). RMA provides crop insurance policies for more than 76 crops and is also conducting several pilot programmes for new insurance measures in certain states and/or counties. These programmes differ from the insurance programmes which are provided within the EU countries. Farm insurance products in the EU are generally provided by commercial insurance companies. Moreover, insurance products in the EU cover only few damages such as hail or fire damage and 'accidental' death of livestock. These insurance programmes are usually not part of government policies for agricultural income support, as opposed to the risk management policies of the RMA (see USDA/RMA, 1999).

Three categories of RMA programmes
After 1995, with passage of the Crop Insurance Reform Act, new insurance products have been offered. Until 1996, the major insurance programme was the Multi Peril Corp Insurance Product (MPCI). Today, this programme still exists but there are many new other coverage programmes. RMA's insurance programmes can be subdivided into roughly three

categories: yield-based programmes, revenue insurance programmes, and several other (pilot) programmes (new policies). Yield-based programmes are based on actual production history (APH). Revenue insurance combines the production guarantee component of crop insurance with a price guarantee. A feature of revenue programmes is the establishment of a revenue target for farmers. The remaining risk management programmes, which are often pilot programmes, include for example options programmes and tax-based schemes.

Some experiences with RMA programmes

In the 1980s, the crop insurance programme had significant actuarial problems, mainly due to 'moral hazard' and 'adverse selection' problems (Skees, 1999). 'Moral hazard' occurs when an individual purchases an insurance policy and as a result of having that policy, alters his behaviour, so as to incrase the potential magnitude of a loss and/or the probability of a loss (see Meuwissen et al., 1999). People could for example become less careful with fire when they have bought fire insurance. Hence, the actual risk of a fire increases. 'Adverse selection' occurs when potential insurance purchasers have more or better information about their potential magnitude of loss and/or probability of loss than does the insurer. This, for example, is the case when someone with very poor farming skills, and hence with a relative high potential of income loss, buys income insurance and the insurance company is not informed of the farmer's poor skills. Therefore, it is important for the insurer to have sufficient information about the purchaser.

The experiences of the new revenue programmes are not yet clear. It seems that the benefits of revenue programmes are not spread equitably. Farmers who bear the highest risks obtain the greatest income transfers. Furthermore, the insurance programmes have become very complex. The complexity of the insurance programmes increases the difficulty of considering reforms. In addition, the fact that the programmes are highly subsidised is problematic, as insurance companies have shown to be very creative in designing new products that will increase sales when they do not have to take the full responsibility for the increased risk. Anyhow, actuarial problems still plague many of the insurance programmes. And still, the insurance problems cannot prevent the government from giving free disaster aid, which is partly under influence of the participation level, which is still too low. One of the factors is that higher coverage percentages are linked with lower subsidies. There is political pressure to increase participation by higher subsidisation. US Congress has twice allocated additional funding for this recently. However, some critics argue that the current insurance programmes in the US should move to more privatisation in order to overcome some of the existing problems (Skees, 1999).

5.5.3 Yield-based crop insurance

Mutli Peril Crop Insurance (MPCI) policies are available for most crops. Other programmes may not be available for some crops in certain areas. Some of the programmes discussed below are being tested in pilot programmes and are only available in selected counties. In fact, the Group Risk Plan and Dollar Plan are sort of derivatives from the Standard MPCI. The Standard MPCI plans can be combined with various pricing tools to provide coverage.

Multi Peril Crop Insurance
Multi Peril Crop Insurance (MPCI) policies insure producers against losses due to natural causes such as drought, hail, wind, frost, extreme moisture, insects, and diseases. Each crop year producers are required to submit an acreage report for each insured crop. Many crops, among which are fruit, vegetables, cereals, tobacco, sugar beets and peanuts, are covered by MPCI. The farmer selects the amount of average yield he wants to insure (usually within the range of 50 to 75%). The farmer also selects the percentage of the predicted price he wants to insure, which is between 55 and 100% of the crop price established annually by RMA. The yield guarantee is the historical actual production history yield times the level of coverage, times the insured acreage, times the insured share. If the harvest is less than the yield insured, the farmer is paid an indemnity payment based on the difference. Indemnities are calculated by multiplying this difference by the insured percentage of the established price selected when crop insurance was purchased. MPCI insurance policies are available from private insurance agents, but the government shares in the premium costs, the indemnity payments, and the expenses of the RMA.

Group Risk Plan
The Group Risk Plan (GRP) is in fact a MPCI policy, using a county index as the basis for determining a loss. The policy is based on the idea that when an entire county's crop yield is low, most farmers in that county will also have low yields. In this way, paperwork and costs could be less than in case of traditional (MPCI) insurance. Producers do only have to provide information on the number of acres planted and not on the production history.

To participate in GRP, producers have to choose one coverage level for each crop and county combination. The grower selects the dollar level of protection per acre and one of the five coverage levels (70, 75, 80, 85, or 90%) of the Federal Crop Insurance Corporation expected county yield. This expected county yield is based on county data from the National Agricultural Statistics Service (NASS) with an adjustment for the yield trend. Indemnities are paid when the NASS yield for the county concerning falls below the trigger level chosen by the farmer. Individual crop losses are not covered when the county yield does not suffer a similar level of loss. This type of insurance is most often selected by farmers whose crops losses follow the county pattern. Farmers may not purchase both GRP and MPCI coverage for the same crop and year.

Dollar Plan
The dollar plan provides protection against declining value due to damage that causes a yield shortfall. The amount of insurance is based on the cost of growing a crop in a specific area. A loss occurs when the annual value of growing a crop is less than the amount of insurance. The maximum dollar amount of insurance is stated on the actuarial document. The insured may select a percent of the maximum dollar amount equal to CAT (catastrophic level of coverage), limited, or additional coverage levels. The dollar plan is available for various crops, including fresh market tomatoes, strawberries, and cherries (in limited areas on pilot programme basis). For example for cherries the amount of insurance is based on the costs of growing cherries in the area. A loss can occur when an insured producer's annual value of the cherry crop is less than the amount of insurance. Annual value is the on-tree value of marketable production.

5.5.4 Revenue insurance

Farm revenue insurance plans are based on both price and yield expectations. If any combination of low yields and/or prices generates a shortfall in insurable crop revenues, indemnity payments are made. There are three basic revenue products: Income Protection (IP), Crop Revenue Coverage (CRP), and Revenue Assurance (AR). In addition to this there are a two so-called 'non-traditional' revenue based programmes: the Group Revenue Insurance Policy (GRIP) and the Adjusted Gross Revenue (AGR) plan (USDA/RMA, 1999).

Income Protection

IP has been introduced in 1995 as a pilot programme that would assure a fixed price for the commodity as well as up to 75% of the average production. In this way, IP protects producers against reductions in gross income when either a crop's price or yield declines from early-season expectations. To guarantee a minimum level of crop revenues for an individual farm, estimates of individual farm yields and the underlying risks of these yields are made using data at the individual farm, county, and crop reporting levels. The revenue guarantee equals the product of the producer's historical yield, the projected price, and the coverage level, chosen by the producer. The price at which the crop actually sells is not used to calculate a loss payment. A projected price (for example for corn the February average of the December Chicago Board of Trade corn contract) is used to determine the revenue guarantee. If realised revenues fall beneath the revenue guarantee, producers receive an indemnity payment for the amount of the shortfall. IP is available to several crops, including corn, cotton, wheat, grain sorghum and soybean.

Crop Revenue Coverage (CRC)

Like Income Protection (IP), Crop Revenue Coverage (CRC) provides revenue protection based on price and yield expectations. CRC differs from IP, however, as it contains 'replacement cost coverage' to protect farmers against losses when market prices rise. Under this product, the price used to calculate the revenue guarantee is the higher of the early-season price or harvest price. CRC can be favourable for farmers when there is a widespread disaster that reduces crop production to the point that market prices rise significantly. As such higher prices increase indemnity payments, CRC premiums are generally higher than IP premiums. For the 1999 crop year, CRC has been available for corn, wheat, sorghum, soybeans, cotton, and rice in most of the States that have significant production of these commodities.

Revenue Assurance (RA)

RA was introduced in 1997 as a pilot project. For 1999, RA provides coverage for corn, soybeans and wheat in only a few States. The coverage of Revenue Assurance is dollar dominated. This means that the farmer selects a dollar amount of cover from a range of 65 to 75% of expected revenue (actual production history yield × cover × projected county price at harvest time). As in the case of IP, the projected county price is used to calculate the revenue guarantee. Farmers receive indemnity when the harvested and appraised yield

times the fall harvest price is less than the unit revenue guarantee. Thus, the difference in the revenue guarantee and the county harvest price is the indemnity.
For example: the projected county price for corn is the average of the closing settlement price on the February and December futures contract for the current crop year, minus the county specific adjustment factor. The county adjustment factor is the historical difference between county harvest price and the average of the final settlement price in November on the CBOT December futures contract. In contrast, IP and CRC programmes utilise historical futures prices to develop measures of price risk. RA utilises market-based measures of price risk available in options markets.

Group Revenue Insurance Policy (GRIP)
Group revenue insurance is also denoted as the Group Risk Income Protection (GRIP). The recently developed GRIP is similar to the Group Risk Plan (GRP) in that participation is driven by the relationship of individual yield to the county yield, except that price is added into the equation to place the focus on revenue.

Adjusted Gross Revenue plan (AGR)
The Adjusted Gross Revenue plan (AGR) insures the revenue of the whole farm rather than an individual crop. AGR is targeted at vegetable farmers. AGR does not only include crops but also incidental amounts of income from animals and animal products, and aquaculture reared in a controlled environment. Incidental livestock income represents the crop production value fed to livestock. Eligible producers may choose from three possible AGR coverage levels. AGR protection is calculated by multiplying the approved gross revenue times the percentage coverage level and payment rate selected by the producer. To calculate the level of guaranteed revenue, the AGR plan uses information from the historic Schedule F tax forms. Indemnities are paid when the adjusted gross income for the insured year is less than the loss inception point. The loss inception point is calculated by multiplying the approved gross revenue by the chosen percentage coverage level (65, 75, or 80%). Once a loss is triggered (due to unavoidable causes), the payment rate is 75% of the revenue shortfall. For 1999, AGR is tested in pilot programmes in Florida, Maine, Massachusetts, Michigan and New Hampshire. AGR complements other federal crop insurance plans. When producers purchase both AGR and other crop insurance plans, the AGR premium will be reduced. However, producers are obliged to purchase also another type of crop insurance when more than 50% of their allowable income is from insurable crops, animals, and animal products.

5.5.5 New insurance programmes

Most new insurance programmes are developed at the request of farmers, following an in-depth study to determine if an actuarially sound programme can be created. New programmes are tested on a pilot basis in selected counties. Most pilot programmes operate for two or three years before they are made more broadly available. One of the best-know new programmes of the RMA is the Dairy Options Pilot Programme.

Dairy Options Pilot Programme (DOPP)

Since milk prices have been very volatile lately and there are few alternatives when it comes to risk management, RMA has developed a Dairy Options Pilot Programme (DOPP). DOPP is designed to teach producers how futures and options work and to give producers experience in buying options contracts to insure a minimum price for their milk (see Box 5.2).

Box 5.2 How options work

Futures

A futures contract is an agreement to buy or sell a set quantity of a commodity at some date in the future at today's price. By using futures contracts, farmers can hedge against the risk of lower prices when they are ready to bring their agricultural produce to the market. If a farmer has a general idea of what his costs will be and - barring catastrophe- of the size of his production, he might consider hedging if he looks at the current price and judges it to be high enough to cover his costs. Through a broker, the farm could in that case purchase enough corn futures contracts to cover his expected produce. The contract obliges the farm to sell at the price that was the current (contract price). The other party agrees to buy at that price. If prices fall, the farmer's position gains value: the farmer has the right to sell at the old, higher price. If prices rise, the other party will profit. The farmer will only receive the stipulated price, which must have appeared satisfactory at the time of the hedge. The point of hedging is not to make a profit, but to avoid a loss. A limitation of the futures markets as a risk management tool is that they permit hedging only at current prices. Thus, if current price is below a producer's profitability level, the producer can only lock in a loss.

Options

Agricultural options convey the right to buy or sell a specific futures contract at a set 'strike price'. In exchange for that right, the buyer of an option pays the seller a fee or premium. These options do not last indefinitely. Mostly, they expire a week or two before the beginning of the delivery month for the futures contract they involve. Options differ from futures in that the right to buy or sell is not an obligation: if prices do not move the way the option holder hoped, he can simply let the option expire unexercised. The advantage of an option is that the buyer can protect against unfavourable price movements without giving up possible windfall profits from favourable price movements. A put option is the opposite of a call. It is the right to sell a specified futures contract at a specific price. The option gains value if prices fall below the exercise (or strike) price. If prices rise, the farmer would let the option expire unexercised, and still be able to sell his crop at the new (higher) price.

Eligible dairy producers must operate a dairy farm that produces at least 100,000 pounds of milk over half a year. During the period of the programme (currently 12 months), farmers purchase options on up to a maximum of 600,000 pounds of milk. Through these options contracts, a farmer buys in fact a kind of price insurance. When milk prices fall below the 'strike price' (or floor) bought, the farmer's option contract increases in value and in this way the farmer can make up the difference. Options protect participating farmers from prolonged periods of low prices that threaten their ability to cover expenses and loan payments. For this pilot programme, farmers pay 20% of the premium whereas the USDA pays 80% of the premium as well as the broker fees up to USD 30 per option. Before participating farmers enter into the programme they have to attend a training session that gives a good overview of how dairy put options work and how to apply them, along with more information on the rules of DOPP.

5.5.6 WTO compatibility of crop insurance programmes

Government financial participation in income insurance and income safety-net programmes is exempted from domestic support commitments when it meets the following criteria (See Annex 2 of the URAA):

- eligibility for such payments shall be determined by an income loss, taking into account only income derived from agriculture, which exceeds 30% of average gross income or the equivalent in net income terms (excluding any payments from the same or similar schemes) in the preceding three-year period or a three-year average based on the preceding five-year period, excluding the highest and the lowest entry. Any producer meeting this condition shall be eligible to receive the payments;
- the amount of such payments shall compensate for less than 70% of the producer's income loss in the year the producer becomes eligible to receive this assistance;
- the amount of indemnity payments shall relate solely to income, i.e. it shall not relate to the type or volume of production undertaken by the producer; or to prices applying to such production; or to factors of production employed;
- where a producer receives in the same year indemnity payments as well as disaster assistance, the total of such payments shall be less than 100% of the producer's total loss.

Most of the insurance programmes are included in the amber box as they do not meet all the criteria mentioned above. But, since this assistance falls under the 'de minimis clause' it is not subject to domestic support commitments. Nevertheless, this should gain some reconsideration, as there have been made considerable supplemental payments to the crop insurance programme.

In accordance with Skees (1999), subsidised crop and revenue insurance could be regarded as production distorting because of its influence on production decisions. Subsidised crop insurance creates incentives for farmers to restructure their operation to produce roughly the same level of risk that existed before the subsidy. Given the subsidy transfers expected in the US for 1999, the wheat, cotton and grain acreage is estimated to be 2 to 3% higher than without risk management subsidies (Skees, 1999). The market effects of the increased subsidisation of the insurance programmes require closer examination.

5.6 Export support

5.6.1 Introduction

In addition to its internal support programmes, the CCC finances several agricultural trade programmes. Most of the programmes, which consist of concessional sales, payments, direct credits and other supporting activities are under responsibility of the Foreign Agriculture Service (FAS). The Export Credit Guarantee Programme is administered by the General Sales Manager.

5.6.2 Export Credit Guarantee Programmes

Export Credit Guarantee Programmes guarantee repayment of credit extended to foreign importers to purchase US farm products (primary products as well as processed products). Currently, there are two of these programmes: the *Export Guarantee Programme and the Intermediate Export Credit Guarantee Programme.* The latter programme provides coverage on longer terms than the first one. Both programmes guarantee, but do not finance, the export of commodities to countries for which credit is necessary to increase or maintain exports. Private financial institutions may be unwilling to provide financing without CCC's guarantee in certain countries.

A subpart of the Export Credit Guarantee programme is the Facility Guarantee Programme (FGP) that provides payment guarantees to facilitate the financing of manufactured goods and services exported from the US to improve or establish agriculture-related facilities in emerging markets. After all, the demand for agricultural commodities in these markets could be constricted due to inadequate storage, processing, or handling capabilities for such products.

5.6.3 Export Enhancement Programme

The Export Enhancement Programme (EEP) supports US agricultural products that meet competition from subsidised agricultural products of other exporting countries. This mainly concerns products from the European Union. Under this programme, cash payments are made to exporters, allowing them to sell agricultural products in targeted countries at prices below those the exporter pays to acquire them.

5.6.4 Dairy Export Incentive Programme

When it comes to the trade of dairy products, the US have established effective measures to restrict imports (high tariffs) as well as formed some programmes to stimulate the export. The Dairy Export Incentive Programme (DEIP) is a dairy-specific version of the Export Enhancement Programme. It helps exporters of dairy products to meet prevailing world prices for some dairy products and destinations. Exporters can make an application for a cash bonus when they cannot effect a transaction because of cheaper competitors. The budget available for the DEIP is relatively small, partly under influence of the WTO-agreement which has established annual export subsidy ceilings.

5.6.5 Market Access Programme

Under the Market Access Programme (MAP) the CCC uses funds or commodities to encourage the development, maintenance and expansion of commercial agricultural export markets through cost-share assistance to eligible trade organisations that implement a foreign market development programme. The MAP partially reimburses participants' costs of conducting approved export promotion activities in foreign countries. This is not the case for brand promotions to foreign companies for foreign-produced products, or to companies that are not recognised as small business concerns, except for cooperatives and non-profit trade associations.

5.6.6 Foreign Market Development Cooperator Programme

The Foreign Market Development Cooperator Programme (FMD) aims to develop, maintain and expand foreign markets for agricultural products from the US. In a partnership with non-profit commodity and trade associations, the USDA conducts market development activities outside the US. Participants include just about every commodity sector in the US. These commodity groups, represented by associates, are funded by their members, including farmers, specialised producers or breeders, farm cooperatives, processors and handlers. The programme focuses on generic commodities rather than individual brand names. Projects of FMD generally fall into one of three categories: market research, trade servicing activities (developing or improving relationships with trade), or technical assistance (expand the foreign country's ability to use or process US commodities).

5.6.7 Emerging Markets Programme

The overall goals of the Emerging Markets Programme are to develop, maintain, or expand markets for US agricultural exports in emerging markets. For this purposes assistance is provided to mainly small and medium sized agribusiness organisations. The Emerging Markets Office (EMO) of the FAS manages the programme. The EMO has also determined the criteria to decide whether a country can be considered as an emerging market. There are many types of projects and activities that may be eligible for funding or co-funding, such as feasibility studies, market research, sector assessments, orientation visits, specialised training, and business workshops.

5.6.8 Supplier Credit Guarantee Programme

Since the 1996 Farm Bill there is a Supplier Credit Guarantee Programme, under which the CCC guarantees a portion of the payments due from a private importer under short-term financing that exporters have extended directly to importers for the purchase of agricultural products from the US. The CCC does not provide financing but guarantees payment due from the importer.

5.6.9 The Section 108 Programme

The US entered into various agreements with foreign governments (including Costa Rica, Morocco, and Sri Lanka) to which sale and exportation of agricultural commodities was financed. These governments repaid the US in local currencies. Most of the foreign currency received under the 'Section 108' provision was loaned by the US to financial institutions in the host country which would, in turn, loan the funds to local businesses in order to foster economic development. After the local financial institutions repaid the US, the funds could be made available for the development of markets for US agricultural commodities. Parties interested in local currencies to develop markets for agricultural commodities in the countries concerned can submit a proposal to the FAS.

5.6.10 Miscellaneous

There are a number of other ways of assistance available from FAS, such as export counselling, trade shows, trade leads, supplier lists, buyer lists, foreign market research, and various information and data on foreign markets.

5.6.11 WTO compatibility of export support policies

Article 9 of the Uruguay Round Agreement on Agriculture outlines the types of export subsidies that are subject to reduction commitments (see Box 4.1). The provisions of the Export Enhancement Programme (EEP) and the Dairy Export Incentive Programme (DEIP) fall under these WTO commitments. The provision of export credits falls under Article 10 of the URAA, which says that 'Members undertake to work toward the development of internationally agreed disciplines to govern the provision of export credits, export credit guarantees or insurance programmes and, after agreement on such disciplines, to provide export credits, export credit guarantees or insurance programmes only in conformity therewith'. However, there is still no agreement among the WTO members on the provision of export credit guarantees. Most of the other export assistance measures are not subject to any reduction commitments, as they are not listed in Article 9 of the URAA. General marketing and promotion services are generally included in the WTO green box (see Annex 2 of the URAA).

5.7 Conservation policy

5.7.1 Introduction

There are many conservation provisions in the 1996 Farm Bill (see Box 5.3). Only few of the conservation programmes will be mentioned and shortly described here, as they are not principally aimed at supporting agricultural prices or incomes. Nevertheless, farmers can be indirectly supported under these policies:

Box 5.3 Natural Resource Conservation Programmes of the USDA

Conservation Technical Assistance
Environmental Quality Incentives Programme
Soil Survey Programmes
Wetlands Reserve Programme
Snow Survey and Water Supply Forecasting
Wildlife Habitat Incentives Programme
Conservation Plant Materials Centre
Forestry Incentives Programme
Watershed Surveys and Planning
Farmland Protection Programme
Watershed Protection and Flood Prevention Operations (including emergency operations)
Conservation Farm Option
Rural Abandoned Mine Programme
Resource Conservation and Development
Grazing Lands Conservation Programme
Outreach for Socially Disadvantaged Farmers
Stewardship Incentive Programme (Forest Service)
Conservation Reserve Programme (Farm Service Agency)
Flood Risk Reduction Programme (Farm Service Agency)

5.7.2 The Conservation Reserve Programme

The Conservation Reserve Programme (CRP) is the largest environmental programme. The CRP is administered by the Farm Service Agency (FSA) and financed by the Commodity Credit Corporation (CCC). This programme concerns safeguarding land from erosion, increasing wildlife habitat, and protecting ground and surface water by reducing water runoff and sedimentation. CRP is a voluntary programme for which participants agree long term contracts (usually 10 to 15 years) in exchange for annual rental payments and cost share assistance for carrying out certain conservation practices. The programme encourages farmers to plant long-term resource-conserving covers to improve soil, water, and wildlife resources. Only the most environmentally-sensitive land, yielding the greatest environmental benefits, will be accepted into the programme. By returning less-vulnerable farmland to production, CRP maximises both conservation and economic benefits.

At present, the CRP is limited to 36 million acres. There is some political pressure to extend the programme to 45 million acres, by which a sort of set aside programme would be reintroduced.

5.7.3 Environmental Quality Incentives Programme (EQIP)

Another important conservation programme for farmers is the Environmental Quality Incentives programme (EQIP). EQIP helps farmers and ranchers improve their property to protect the environment and to conserve soil and water resources. Participants can take advantage of education in new conservation management practices, technical support, and cost-share assistance and incentive payments. Payments could for example be made for nutrient management, pest management, grazing land management, terraces, and tree planting. Five- to ten-year contracts are made with eligible producers. Fifty percent of the funding will be made available for natural resources related to livestock production.

5.7.4 WTO compatibility of conservation policies

Conservation-based assistance is generally regarded as a non trade-distorting policy. In that case, conservation policy could be exempted from domestic support reduction commitments. Annex 2 (Paragraph 12) of the URAA outlines the criteria for determining whether a payment under an environmental programme is exempted from the AMS:

- eligibility for such payments shall be determined as part of a clearly-defined government environmental or conservation programme and be dependent on the fulfilment of specific conditions under the government programme, including conditions related to production methods or inputs;
- the amount of payment shall be limited to the extra costs or loss of income involved in complying with the government programme.

As the programmes described in this section meet the criteria above, they are typified as green box policies. In 1995, 5.2% of green box expenditures of all notified WTO members were directed to environmental programmes. In the US, environmental and resource programmes account for some 7% of total agricultural assistance.

5.8 Foreign food aid and domestic nutrition assistance

5.8.1 Foreign food aid

There are several food aid programmes focussed on external food aid purposes. The food aid programmes are administered by the USDA and/or the Agency for International development (AID). The food aid programmes serve various purposes including the expansion of export markets for the US and the promotion of equitable and sustainable development. Commodities which are directed as food aid are furnished from the Commodity Credit Corporation's (CCC's) inventory acquired under price support programmes or purchased from private stocks. The total amount of food aid to foreign countries amounted to about 10 million metric tonnes in 1999. This has been the largest amount of food aid during the previous 25 years.

5.8.2 Domestic nutrition assistance

According to the USDA, nutrition is one of their central missions (USDA, 1998a). The importance of the nutrition programmes is proved by the total appropriation for the nutrition assistance programmes which amounted to USD 37.2 billion in 1998. This is nearly two-thirds of the entire USDA budget.

Box 5.3 USDA's domestic nutrition assistance programmes

Nutrition programmes

- The Food Stamp Programme

  This programme helps low-income households increase their food purchasing power and obtain a better diet.
- The National School lunch Programme (NSLP)

  NSLP is a federally assisted meal programme operating in schools and residential child care institutions. It provides low-cost or free lunches to more than 26 million children each school day.
- The School Breakfast Programme (SBP)

  This programme provides cash assistance to States to operate breakfast programmes in eligible schools and residential child care institutions. Children can receive free or low-cost breakfast (depending on their family income) at school.
- The Nutrition Education and Training Programme (NET)

  NET is a direct grants-to-States programme that provides the nutrition education (for children, parents, food service personnel etcetera) and food service training component of the SBP and NET nutrition programmes.
- The Special Supplemental Nutrition Programme for Women, Infants, and Children (WIC)

  The goal of WIC is to improve the health of low-income, at-risk pregnant, postpartum, and breastfeeding women, infants and children up to 5 years old, by providing food, education and access to health care.
- The WIC Farmers Market Nutrition Programme (FMNP)

  This programme provides fresh food to WIC-participants from farmers markets. In addition, the programme is aimed at expanding consumers' awareness and use of farmers markets.
- The Commodity Supplemental Food Programme (CSFP)

  CSFP provides commodity foods to supplement the diets of low-income infants, children, mothers and elderly.
- The Child and Adult Care Food Programme (CACFP)

  This programme provides healthy meals and snacks in child adult day care facilities.
- The Homeless Children Nutrition Programme

  This programme provides free food service throughout the year to homeless children under the age of six in emergency shelters. Sponsoring organisations are reimbursed for the meals that they serve.
- The Summer Food Service Programme (SFSP)

  The SFSP provides free meals to low-income children during school vacations.
- The Special Milk Programme

  This programme provides milk to children in schools and child care institutions that do not participate in other Federal meal service programmes. The programme reimburses schools for the milk they serve.
- The Nutrition programme for the Elderly (NPE)

  The NPE helps provide elderly people with nutritionally sound meals through meals-on-wheels programmes or in senior citizen centres and similar settings.
- The Food Distribution Programme on Indian Reservations (FDPIR)

  This programme provides monthly food packages to low-income families living on or near reservations.
- The Emergency Food Assistance Programme (TEFAP)

  TEFAP provides food assistance to needy citizens through the distribution of USDA commodities. It includes for example soup kitchens for the homeless.
- The Nutrition Assistance Programme in Puerto Rico and the Pacific Islands

  To Puerto Rico, American Samoa, and the Commonwealth of the Northern Mariana Islands cash are grants provided that can be used special projects related to food production and distribution.
- Food assistance in case of natural disasters and other crisis

  In 1998, USD 51,8 million was provided for disaster food assistance to victims of Hurricanes, severe winter weather, tornadoes, and floods in several States.

The nutrition assistance programmes are administered by the Food and Nutrition Service (FNS). The overall goal of these programmes is to provide children and needy families better access to food and a more healthful diet. One out of every five Americans is reached by at least one of the nutrition assistance programmes (see Box 5.3). Although the nutrition assistance is primarily used for providing food assistance to needy families and children, it could also be a useful instrument to promote domestic agricultural products an to get rid of the stocks which have been built up by providing price support to farmers.

5.8.3 WTO compatibility of foreign food aid and domestic nutrition assistance

Foreign food aid

Foreign food aid is not subject to export subsidy commitments if donors of international food aid shall ensure (Article 10 of URAA):

- that the provision of international food aid is not tied directly or indirectly to commercial exports of agricultural products to recipient countries;
- that international food aid transactions, including bilateral food aid which is monetised, shall be carried out in accordance with the FAO 'Principles of Surplus Disposal and Consultative Obligations' including, where appropriate, the system of Usual Marketing Requirements (UMRs); and
- that such aid shall be provided to the extent possible in fully grant form or on terms no less concessional than those provided for in Article IV of the Food Aid Convention 1986.

It is generally acknowledged that foreign food aid programmes also serve the interests of domestic producers. WTO compatibility of the food aid programmes as well as their compliance with the UMR criteria of the FAO committee on Surplus Disposal require critical attention for that reason.

Domestic nutrition assistance

The URAA defines domestic food aid as follows (Annex 2, Paragraph 4): 'expenditures (or revenue foregone) in relation to the provision of domestic food aid to sections of the population in need'. These expenditures are considered as green box policies (and hence exempted from reduction commitments) when they are subject to clearly defined criteria related to nutritional objectives. Moreover, food aid must be provided in the form of direct provision of food to those concerned or in the form of means that allow eligible recipients to buy food. The food that governments purchase for this purpose must be bought at current market prices. Sales from food security stocks shall be made at no less than the current domestic market price for the product and quality in question.

The nutrition assistance programmes in the US are assumed to meet the above criteria. Domestic food aid was the largest category of green box support in 1995 (for the total of all WTO members). The US spent most of these USD 40 billion. Green box policies are regarded as minimally or non trade-distorting. One may question whether food aid is actually non trade-distorting support. Such a large amount of food aid supplies probably does affect supplies available for export and the demand for imports.

5.9 Marketing and regulation

5.9.1 Marketing and regulatory programmes

The marketing and regulatory programmes (MRP) of the USDA, also known as the 'MRP mission', comprise three agencies: the Agricultural Marketing Service, the Animal and Plant Health Inspection Service (APHIS), and the Grain Inspection, Packers and Stockyards Administration. These three agencies are committed to facilitate the domestic and international marketing of US agricultural products and to ensure the health and care of animals and plants.

The AMS

The Agricultural Marketing Service (AMS) includes six commodity divisions (cotton, dairy, fruit and vegetable, livestock and seed, poultry, and tobacco) that employ specialists who provide standardisation, grading and market news services for those commodities. Furthermore, they enforce Federal Laws such as the Federal Seed Act and the Perishable Agricultural Commodities Act. The commodity divisions also oversee marketing agreements and orders, administer research and promotion programmes, and purchase commodities for Federal food programmes.

The Science and Technology division is an AMS organisation as well. This organisation provides scientific support to AMS programmes, issues certificate of protection for new plant varieties, and administers a pesticide data system. The Transportation and Marketing Division brings together a combination of traffic managers, engineers, rural policy analysts, international trade specialists, and agricultural marketing specialists to help solve problems of agricultural transportation. The division also administers a programme involving financial grants to States for marketing improvements. The division assists in the planning and design of marketing facilities, processes, and methods in co-operation with State and local governments, farmer groups, universities and other segments of the food industry.

APHIS

The APHIS guards US borders against foreign agricultural pests and diseases through activities at US ports and overseas in foreign countries. Moreover, the APHIS is occupied with detecting and monitoring animal and plant diseases and carrying out emergency operations if foreign pests or diseases get past the US borders. Other activities are: combating certain domestic animal diseases and plant pests; facilitating agricultural exports by establishing scientifically based sanitary and phytosanitary standards; controlling wildlife damage to agriculture and natural resources and threats to human health and safety; enhancing the care of animals; and ensuring the safety of agricultural products of biotechnology.

5.9.2 WTO compatibility of marketing and regulatory programmes

The US marketing and regulatory programmes are classified either under the exempted domestic support or under the Agreement on the application of sanitary and phytosanitary measures (the SPS agreement). The 2nd paragraph of Annex 2 of the URAA includes 'general services' which are exempted from reduction commitments, among which are:

- pest and disease control, including general and product-specific pest and disease contral measures, such as early-warning systems, quarantine and eradication;
- inspection services, including general inspection services and the inspection of particular products for health, safety, grading or standardisation purposes; and
- marketing and promotion services, including market information, advice and promotion relating to particular products but excluding expenditure for unspecified purposes that could be used by sellers to reduce their selling price or confer a direct economic benefit to purchasers.

Nevertheless, the interpretation and application of a number of veterinary and sanitary market access regulations require further investigation.

5.10 Credit and loan support

5.10.1 Introduction

The Farm Service Agency (FSA) makes and guarantees loans to family farmers and ranchers to purchase farm land and finance agricultural production. The loan programmes are designed to help family farmers who are temporarily unable to obtain private commercial credit. This often concerns farmers who have suffered from natural disasters, beginning farmers, or farmers who have limited resources with which to establish and maintain profitable farming operations. The FSA farm loans can be either guaranteed loans or direct loans. In the case of loan guarantees local agricultural lenders make and service the loan and FSA guarantees it against loss up to a maximum of 90% in most cases. For farmers who are unable to qualify for a loan guarantee from a commercial lender, FSA also makes direct loans, which are serviced by a FSA official. The farm loans must be fully secured and can only be approved for farmers who have repayment ability. In response to the difficult economic conditions for farming, the budget for several forms of credit and loan support have been increased in 1998 and 1999.

5.10.2 Farm loans

Farm Ownership loans
With Farm Ownership loans farmers can purchase farmland, construct or repair buildings and other fixtures, and develop farmland to promote soil and water conservation. Eligible applicants may obtain a direct loan up to a maximum of USD 200,000, and USD 300,000 for a guaranteed loan. Maximum indebtedness for guaranteed loans is USD 700,000 and the maximum repayment term is 40 years.

Farm Ownership Downpayment loans

The Farm Ownership Downpayment Loan Programme is a special programme to assist beginning farmers and ranchers who are entering agriculture to purchase a farm or ranch. The programme also provides a way for retiring farmers to transfer their land to a future generation of farmers and ranchers. Eligible farmers may obtain a direct loan for up to 30% of the purchase price of a family-size farm, or the farm's appraised value, whichever is less. The purchase price of the farm may not exceed USD 250,000. Applicants have to make a down payment of at least 10% on the purchase. The interest rate on the 30% portion is fixed at 5% and must be repaid in 10 years or less. The remainder may be guaranteed by FSA.

Farm operating loans

Operating loans can be used for several purposes. These can include machinery and equipment, livestock, feed, seed, fuel, farm chemicals, insurance, real estate repairs and improvements, family subsistence, costs related to land and water development, and the refinancing of debt. The limit on farm operating loans is USD 200,000 for direct loans and USD 400,000 for a guaranteed loan. The repayment term varies, depending on the purposes.

Emergency Loan Assistance

Emergency loans are only available as direct loans. These loans assist farmers who have suffered physical or production losses in areas declared as disaster areas (section 5.3).

Rural Youth Loans

Rural Youth Loans may be made to individual rural youths to establish and operate income-producing projects of modest size in connection with their participation in 4-H clubs, Future Farmers of America, and similar organisations. Projects must be part of an organised and supervised programme of work. The project must be planned and operated with the help of the organisation advisor. Applicants must be at least 10 but not more than 20 years old to be eligible. Furthermore they must live in rural 'open country' or in a town of less than 10,000 people and be unable to obtain a loan from other sources.

Loans for beginning farmers and ranchers

Each year, a percentage of farm ownership and operating loan funds is targeted to beginning farmers. To be eligible, a beginning farmer must have operated a farm for less than 10 years. Moreover, if the applicant is a business entity, all members must be related by blood or marriage, and all the stockholders in a corporation must be eligible beginning farmers. In addition there are some other requirements concerning land ownership and management ability.

Loans for Socially Disadvantaged Persons

For direct loans and guarantee loans to socially disadvantaged applicants the FSA reserves special funds every year. A socially disadvantaged farmer or rancher is one of a group whose members have been subjected to racial, ethnic, or gender prejudice because of their identity as members of the group without regard to their individual qualities. Socially disadvantaged groups include women, African Americans, American Indians, Alaskan Natives, Hispanics, Asians and Pacific Islanders. Types of loans that may be provided include both farm operating and farm ownership loans. Guaranteed loans also may be made for ownership or operating purposes.

5.10.3 WTO compatibility of loan support

Structural adjustment assistance provided through investment aids is exempted from WTO reduction commitments if it meets the following criteria (Paragraph 10, Annex 2 of the URAA):

- eligibility for such payments shall be determined by reference to clearly defined criteria in programmes designed to assist the financial or physical restructuring of a producer's operations in response to objectively demonstrated structural disadvantages. Eligibility for such programmes may also be based on a clearly defined government programme for the reprivatisation of agricultural land;
- the amount of any such payments shall not be related to or based on the type or volume of production undertaken by the producer, or to prices applying to such production;
- the payments shall be given only for the period of time necessary for the realisation of the investment in respect of which they are provided;
- the payments shall not mandate or in any way designate the agricultural products to be produced by the recipients except to require them not to produce a particular product;
- the payments shall be limited to the amount required to compensate for the structural disadvantage.

Farm credit, ownership loans and operating loans are on basis of the above criteria considered as green box support. In 1995, these support measures were fairly important as 12% of the total green box expenditures (of all notified WTO members) were for account of investment aids. Investment aids to structurally disadvantages producers are designed to increase production and income of some producers, but the effect may be minimal if the criteria for the eligibility limited to a small enough share of total farm sector (USDA/ERS, 1998).

5.11 Rural development support

5.11.1 Introduction

USDA's rural development policy is aimed at helping rural Americans to develop sustainable communities and to improve their quality of life. In fact, many rural communities are coping with problems such as job losses, out-migration, and diminishing of services. USDA Rural Development is working with State, local and Indian tribal governments, as well as private and non-profit organisations and user-owned cooperatives to reverse these adverse developments.

5.11.2 Rural development programmes

In 1997, the *Fund for Rural America* was launched. This Fund unites the many rural development efforts of the USDA into one strategy aimed at addressing the most pressing needs in rural America and improving the quality of life of the rural population. The Fund is dedicated to three main purposes, which all three receive USD 33.3 million annually: (1) research, education and extension; (2) rural development; and (3) the agriculture secretary's discretion for either research, education and extension or rural development, or both. Funds for research and education will for example be distributed to the Alternative Agricultural Research and Commercialisation Corporation (AARC). The (AARC) Corporation encourages new research and assists with the commercialisation of new, non-food uses of agricultural commodities. The AARC is aimed at creating jobs, enhancing economic development of rural communities and diversifying markets for raw agricultural and forestry products and animal by-products.

Since 1996, certain rural development programmes are placed under the *Rural Community Advancement Programme* (RCAP). These programmes are administered through three agencies: the Rural Utilities Service (RUS), the Rural Housing Service (RHS) and the Rural Business-Cooperative Service (RBS).

Rural Housing Service (RHS) programmes

RHS programmes help finance new or improved housing for moderate- and low-income families. RHS also help rural communities finance, construct, enlarge or improve fire stations, libraries, hospitals and medical clinics, industrial parks, and other community facilities. There are several RHS loan programmes available to achieve these goals.

Rural Utilities Service (RUS) programmes

The RUS helps to improve the quality of life in rural areas through loans and grant programmes for electric energy, telecommunications and water and waste disposal projects. RUS programmes leverage Federal funds with private capital for investing in rural infrastructure. RUS electric and telecommunications programmes provide financial aid for distance learning and telemedicine. The water and waste disposal programmes provide loans and grants to develop water and wastewater systems and to provide technical assistance or training to associations located in rural areas and small towns.

Rural Business-Cooperative Service (RBS)

The goal of the RBS is to promote a dynamic business environment in rural areas. RBS works in partnership with the private sector and community-based organisations to provide financial and technical assistance as well as business planning. RBS business programmes provide financial aid (direct loans, guarantee loans, or grants) to projects that create or preserve quality jobs and/or promote a clean rural environment. The RBS cooperative Services Programme helps rural residents form new cooperative businesses and improve the operations of existing cooperatives. For these purposes, the Cooperative Service Programme provides technical assistance to cooperatives, conducts cooperative-related research, and produces educational materials that promote public understanding of cooperatives.

5.11.3 WTO compatibility of rural development support

Most of the above rural development programmes can be typified as infrastructural services under the 'general services' category of support measures that are exempted from the WTO reduction commitments. In this case, expenditures must be directed to the provision or construction of capital works only, and shall exclude the subsidised provision of on-farm facilities other than for the reticulation of generally available public utilities (URAA, Annex 2, Paragraph 2). Moreover, these expenditures may not include subsidies to inputs or operating costs, or preferential charges.

However, these programmes also have their own potential to affect production. Government service programmes affecting infrastructure and other general service activities provide information, inspections, and other kinds of assistance to agriculture in general, but do not directly subsidise producers or specific commodities' production.

5.12 Research, extension and education

5.12.1 Research, extension and education programmes

The USDA has defined the following eight main purposes for agricultural research, extension and education (USDA, 1996d): (1) enhance competitiveness; (2) increase long-term-productivity; (3) develop new uses and new crops; (4) promote economic opportunity; (5) improve risk management; (6) protect the environment; (7) support higher education; and (8) maintain an adequate, nutritious, and safe supply of food.

The Cooperative State Research, Education, and Extension Service (CSREES) links the research, education and extension programmes of the USDA. The CSREES network includes more than 130 colleges of agriculture, 59 agricultural experiment stations, 57 cooperative extension services, 63 schools of forestry, land-grant institutions in every state, 27 colleges of veterinary medicine, 42 schools and colleges of human sciences, and 190 Hispanic-Serving Institutions. CSREES research, education, and extension is provided through programmes in Plant and Animal Production, Protection, and Processing; Natural Resources and Environment; Rural, Economic and Social Development; and Families, 4-H, and Nutrition; Partnerships; Competitive Research Grants and Awards Management; Science and Education Resources Development; and Communications, Technology, and Distance Education. Partly, these programmes are funded by the Fund for Rural America (section 5.11).

5.12.2 WTO compatibility of research, extension and education programmes

Training, extension, and advisory are ranked among the green box policies (general services). For the total of 36 notified countries, these policies make up almost 8% of green box expenditures. These policies are regarded as not trade distorting. However, some of these measures may, such as the case with rural development policies, indirectly influence farmers' production decisions.

6. Agricultural support in Canada

6.1 Introduction

Canadian agricultural support policies fall into three major groups: market regulations, income stabilisation, and input and output subsidies. In addition there are several other policy initiatives. In this chapter an impression is given of the quantitative dimensions of Canadian agricultural support (section 6.2). Next, the major support measures are described, starting with the market regulations (section 6.3). These marketing regulations are aimed at stabilising agricultural markets and improving or stabilising producer prices. One of the most characteristic features of Canadian market regulations are the supply management systems, of which the Canadian Wheat Board (CWB) is widely known.

The Canadian income stabilisation policies are generally directed towards the agricultural commodities that are not covered by the supply management system (section 6.4). Stabilisation policies include crop income insurance programmes.

Output subsidies are not often used in Canadian agricultural policies, as opposed to input subsidies (section 6.5). Input subsidies include a great variety of programmes, which are for instance directed to transport subsidies or credit for farmers.

Next to the above-mentioned policy instruments, there are many policy instruments that may be important for particular commodities or in certain regions, such as trade policies (section 6.6), agri-environmental policy (section 6.7), and rural policy and research, education and extension initiatives (section 6.8).

6.2 Financial assistance

Federal and provincial governments are jointly responsible for the implementation of Canada's agricultural policies. In 1999, about 46% of the Canadian expenditures for the Agri-Food sector (CAD 4.2 billion) was provided by the provinces (AAFC, 1999a). Total agri-food support expenditures have shown a declining trend in the 1990s. Canada's agri-food expenditures include programme payments, tax expenditures, operating expenditures, and capital expenditures. Programme payments account for the largest share of expenditures, of which on its turn, income support and stabilisation is the largest category (Figure 6.1). Most of these payments relate to one of the following sectors: the red meats sector; grains and oilseeds; dairy, poultry, and eggs; or the horticultural sector. Together, these four groups account for about 90% of total gross farm sales (Barichello, 1996).

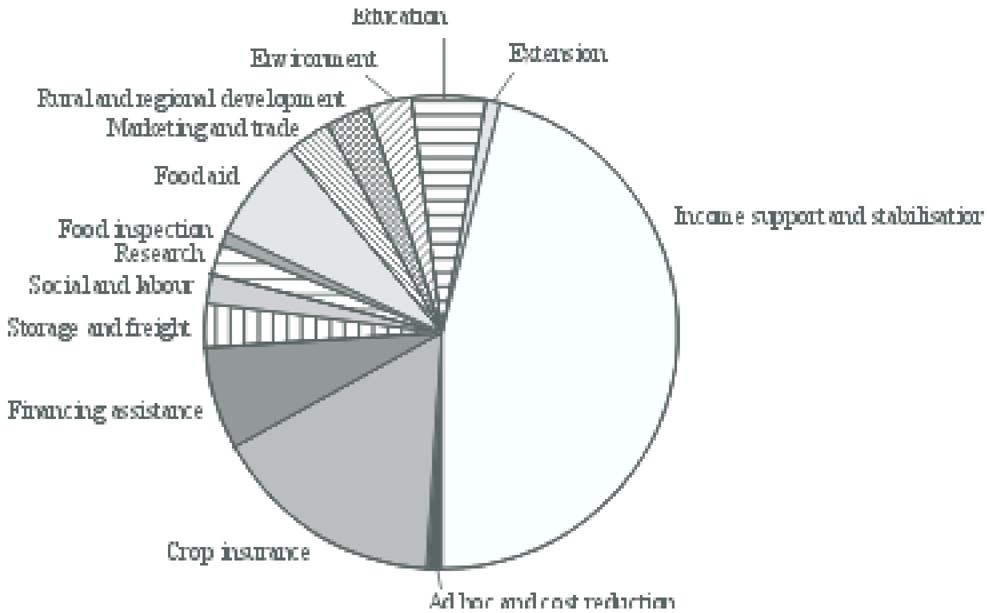

Figure 6.1 Composition of Canadian government programme expenditures in support of the agri-food sector,1999/2000
Source: AAFC, 1999a.

6.3 Market regulations

6.3.1 Introduction

As early as in the 1920's there were marketing boards in Canada. The purpose of these boards was the 'orderly marketing' of agricultural commodities (Ash, 1998). There was a major development in the evolution of these boards in the late 1960s and early 1970s when some of them gained powers to restrict domestic supply and some of them received import protection. This occurred in the dairy, poultry, and egg boards. These boards form the so-called supply management system. The other application of marketing boards is the Canadian Wheat Board (CWB). This board does not have the powers of supply control, but has other powers in the grains and oilseeds sector that have made it the largest marketing board in Canada.

Other elements of Canadian market regulations are the Price Pooling Programme and the Advance Payments Programme. The Price Pooling Programme assists and encourages co-operative marketing of products. The programme provides a price guarantee to marketing agencies that protects them against unanticipated declines in the market price of their products. The Advance Payment Programme improves cash flow at or after harvest through the provision of a cash advance to the farmer. This allows a farmer to store the crop and sell it throughout the crop year to achieve higher returns.

6.3.2 Supply management systems

The Canadian supply management system covers dairy and poultry products. It contains three main elements: (1) control of domestic production/marketing; (2) import controls/tariffs; and (3) administered pricing. Production/marketing controls are aimed at achieving a balance in domestic supply and demand. To achieve this balance, demand and production targets are both forecasted each year, largely on the basis of historical shares. Individual farm production is controlled through a quota system, administered by provincial agencies. Individual producers are allowed to trade the quota rights.

To keep supply and demand in balance (and prices at certain levels), trade flows have to be controlled as well. Under the GATT, quantitative border restrictions were still permitted. Under the WTO agreement, implemented from 1996 onwards, import quotas have to be replaced with equivalent tariff protection. However, it has been possible to set high tariffs for supply-managed commodities. Hence, tariffs have maintained a protected domestic market.

For industrial milk, fluid milk and poultry products, administered prices exist. The federal Canadian Dairy Commission sets target prices for industrial milk annually. Actual prices paid are determined by the provincial agreements, with reference to this target price. As the supply management raises consumer prices, the federal government provides a dairy subsidy, effectively reducing the price of milk paid by consumers. Fluid milk prices and prices of poultry products are determined by the provinces. To reflect market factors in addition to production costs, these prices are subject to adjustments negotiated between provincial marketing boards and processors. On behalf of the competitiveness of Canadian food processors who use industrial milk as an ingredient for their products, a special milk class has been introduced. In addition, there is a 'pooling agreement' to pool industrial and fluid milk reserves across two regions. This provides more equitable distribution of milk revenues within these pooled regions.

6.3.3 The Canadian Wheat Board

Of all marketing boards in Canada, the Canadian Wheat Board (CWB) is the largest and most important. The CWB is in fact world's largest exporter of wheat and barley. The CWB was created in 1935. The CWB is a farmers marketing agency, organised as a shared governance corporation with a Board of directors, the majority of whom are elected by farmers. The three major objectives of the CWB are:

- maximising net producer returns from the marketing of grains grown within the CWB region;
- equalising prices to producers at a given location, through a system of price pooling;
- providing equitable access for farmers to the grain handling and transportation system.

To meet these objectives, the CWB has been given monopoly authority under federal legislation to market wheat and barley on behalf of all farmers in Western Canada in export markets and within Canada for human consumption. The CWB is obligated to accept all grain delivered as called for in delivery contracts it administers. When a farmer delivers grain to the CWB he will receive an initial payment based on the grade delivered. Then he becomes a shareholder in the pool account for that grain. As a shareholder, a farmer is entitled to additional revenues earned during the crop year, above the initial payment. If the initial payment is higher than the price obtained on the market, the federal government will underwrite that payment, paying the CWB for any losses incurred. Through the price-pooling system, farmers all receive the same value for a particular grade of grain. Price-pooling also reduces the risk of adverse price movements throughout the year, since it smoothes out the ups and downs of the market.

The CWB uses marketing and sales plans to sell its grains. These plans involve information from virtually all departments at the CWB: Weather and Crop Surveillance, Market Analysis, Risk Management, Transportation, Country Services, and Planning and Coordination. The operating costs of the CWB amounted to CAD 47 million in 1996/1997, which corresponds to about 0.8% of CWB's total sales (CWB, 1999).

It should be mentioned that the CWB does not have powers of internal supply control. Moreover, the CWB does not have taxing power or revenue sources other than the revenues it receives from its sales. Hence, the CWB can not subsidise grain prices directly. Moreover, the CWB cannot stabilise prices between years, but only within years. All it can do to raise producers prices is to take advantage of its monopsony and single-desk seller position. The CWB may achieve potential economies of scale in transportation and marketing and gain prices in certain markets when it has the market power to do. Whether it has such market power is a matter of discussion.

6.3.4 The Price Pooling Programme

Under the Price Pooling Programme (PPP), AAFC (Agriculture and Agri-Food Canada, the Canadian department of agriculture) enters into an agreement with a marketing agency (associations of producers, processor, or selling agent) for the marketing of agricultural products under a cooperative plan. The agreement provides for a price guarantee for products sold, allows the marketing agency to make an initial payment to the producers and covers eligible storing, processing, carrying and selling costs of the marketing agency, to a fixed maximum. At the end of the marketing period, if the actual average price received by the marketing agency is less than the initial payment plus the eligible costs, the programme allows for a payment for the shortfall. If the price exceeds the guarantee level, the surplus is retained by the pool for future use or it is distributed to the producers.

6.3.5 The Advance Payment Programme

The Advance Payment Programme (APP) is accessible for farmers through their producers organisations which administer the APP through an agreement with the Federal Government. At or after harvest time producers can receive a cash advance payment to store eligible crops (all crops as well as honey and maple syrup). The APP guarantees the repayment of the advances made to farmers by the producer organisation. These guarantees help the producer organisation to borrow money from lenders at lower interest rates. The organisation can then issue producers an advance on the value of their crop once the crop is in storage. The Federal Government pays the interest of the first CAD 50,000 of an advance issued to a producer. The producer organisation is responsible for ensuring that the cash advance is repaid when the crop is sold. To cover operational costs, the organisation may charge producers an administration fee.

6.3.6 WTO compatibility of Canada's market regulations

In WTO terms, the CWB is regarded as a State Trading Enterprise (STE), just as the Canadian Dairy Commission, the Freshwater Fish Market Corporation, the Ontario Bean Producers' marketing board, and the provincial liquor boards. As early as 1947, the contracting parties of the GATT recognised that STEs could distort global trade. GATT Article XVII recognises STEs as legal enterprises, but requires that they do not discriminate among importers or exporters when they make purchases or sales and that STEs act 'in accordance with commercial considerations'. Countries must report information about their STEs to the WTO. The WTO defines STEs as 'governmental and non-governmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in the exercise of which they influence through their purchase or sales the level or direction of imports or exports'.

The CWB has been the subject of much scrutiny and discussion in recent years. The board is sometimes accused of not being transparent in its marketing practices, particularly its price setting, and of restricting producers from pursuing niche-market opportunities directly. The lack of transparency in the pricing and operational activities of STEs has caused some WTO members to express concern that other WTO members could use STEs to circumvent WTO commitments on export subsidies, market access, and domestic support. It is also argued that statutory authorities provide STEs with opportunities unavailable to commercial firms that compete against them. Hence, some WTO members want STEs to be on the agenda for the Millennium Round of WTO negotiations. They want the disciplines on non-competitive behaviour practised by STEs to be improved. Also because of the WTO accession negotiations of China and other countries, in which STEs play a large role in exporting or importing and could mask export subsidies and import barriers.

6.4 Income stabilisation policies

6.4.1 Introduction

In 1991, an umbrella statute (the Farm Income Protection Act, FIPA) was introduced to provide a general framework for income stabilisation and safety net programmes for virtually all commodities. All the programmes under this framework are guided by the same principles (Ash, 1998):

- market neutrality;
- equity among commodities;
- social, economic and environmental sustainability; and
- consistency with international obligations.

The main programmes of this safety net framework, developed to address the different needs of different sectors of the industry, are crop insurance, the Net Income Stabilisation Account (NISA), and province-specific companion programmes. The National Tripartite Stabilisation Plan (NTSP) has been ended in 1998. NTSP was a revenue insurance programme that intended to reduce losses to producers due to adverse changes in market prices or costs. The former Gross Revenue Insurance Plan (GRIP) has been terminated as well. GRIP was a price-based programme complementary to crop insurance.

6.4.2 Crop insurance

Crop insurance provides production risk protection to producers by minimising the economic effects of crop losses caused by natural hazards like drought, hail, flood, frost, wind, fire excessive rain, heat, snow, unpreventable disease, insect infestation and wildlife. The Crop Insurance Programme is a provincially delivered programme whereby federal financial contributions are made to provincial crop insurance schemes. Crop insurance is a voluntary programme extended to a wide variety of crops. Virtually every farmer can be covered by the programme. Coverage varies according to crops grown in a certain province.

Crop loss protection is available to farmers in the form of a production guarantee. A production guarantee is based on a producer's probable yield. The producer will be protected for a yield per hectare based on the individual's previous production history. If production falls below that yield, the producer may be eligible for an indemnity payment. Generally, the coverage rate is 70 to 80% of a farmer's historic yield.

In 1999, there were 10 provincial crop insurance programmes in place. The federal role in these programmes is to contribute financially, to provide reinsurance protection, to contribute to policy development relating to crop loss insurance, to perform research and actuarial studies related to premium rates and crop coverage, and to facilitate the development, modification and promotion of provincial crop insurance programmes. Premiums are charged so that the programme is actuarially sound, with producers contributing 50% and the two levels of government contributing 25% each.

6.4.3 The Net Income Stabilisation Account (NISA)

The Net Income Stabilisation Account (NISA) is a voluntary programme that assists farmers in stabilising incomes for the long term. Essentially, this is done by establishing a fund which receives contributions from farmers during good years in order to provide withdrawals during poor years. NISA is available in all ten Canadian provinces. Any farmer, corporation, cooperative or communal organisation that files an income tax return reporting farming business income/loss and meets specified eligibility criteria may participate. Status Indians farming on reserves who do not file a tax return may also participate. NISA participants pay an Administrative Cost Share of CAD 55. NISA covers most agricultural products except poultry and dairy.

Participating farmers may contribute up to 3% of eligible net sales (ENS). ENS are limited to CAD 250,000 per individual. The basic contribution is matched by contributions of the federal and provincial governments. Producers may contribute an additional 20% of eligible net sales, but these deposits are not matched by government contributions. Interest on funds is paid at market rates plus a 3% bonus. Producer deposits may be made at one of 18 participating financial institutions, the so-called Fund 1. Government deposits and all interest earned in Fund 1 are held in the Consolidated Revenue Fund, called Fund 2. Withdrawals are taken first from Fund 2 and then, if required from Fund 1. Since the producer contributes after-tax dollars into Fund 1, income tax is paid only on the withdrawals from Fund 2.

Withdrawals are allowed when the gross margin for the entire farm falls below the five-year average (the Stabilisation Trigger), or when the income from all sources falls below a defined minimum level (the Minimum Income Trigger, which currently amounts to CAD 10,000). If a payment is allowed under both these two triggers, the larger amount applies. There is also an option of interim withdrawals, introduced in 1998. In this case, farmers may receive funds from their account in the year in which their financial needs arise. When a producer decides to close his account (which is possible at any time) the producer may choose to be paid out either in a lump sum or in annual instalments over a period of up to five years.

Experiences with NISA

Participation in NISA has been very strong in most Canadian provinces (Skees, 1999). According to Meuwissen et al. (1999) NISA can provide substantial risk protection to farmers once account balances have had time to accumulate. Concerning administrative costs, NISA appears less burdensome than crop insurance, because of the relatively simplicity of the programme. Another advantage of NISA is the provision of protection at the farm level rather than protection of crop yields and/or prices individually. On the other hand, there could be some difficulties with NISA in periods of low farm income. The account may run dry during prolonged periods of low prices and are paradoxically most costly to taxpayers when farmers do not need them. Moreover, when the start-up year for a given producer is 'bad', he will have no money to withdraw. This will either create a budget crisis for the government in making payments to such producers, or create a financial crisis for the farmer. According to Romain and Calkins (1997), NISA-type safety nets are sensitive to accounting practices: accountants can manipulate the numbers to allow farmers to withdraw money. Coble (1995, in accordance with Meuwissen et al., 1999) states that NISA could provide an adverse incentive effect if the policy encourages maximisation of the NISA account, which could most easily be accomplished by growing higher risk, higher return crop portfolios. However, this effect can also be considered as a benefit, as a shift to more risky crops could mean more expected profit (Meuwissen et al., 1999).

6.4.4 Province-specific companion programmes

Province-specific companion programmes are intended to complement the other income stabilisation programmes, by addressing more specific provincial and regional concerns. There are four broad categories of these province-specific programmes (see AAFC, 1998):

- Industry Research and Development Programmes, which are aimed at enhancing the long-term competitiveness and stability of the sector, through research, development, training, promotion etcetera. In 1997/1998 several provinces introduced programmes under this umbrella such as Investment Agriculture Funds (British Columbia), a bio-technology centre (New Brunswick), an Apple Industry Development Fund (Nova Scotia);

- Whole-farm (Disaster) Programmes are non-NISA disaster programmes based on gross margins for individual farm units. In 1997/1998, only two provinces started suchlike programmes, of which the Farm Income Disaster Programme of Alberta involved some CAD 37 million and the Agricultural Disaster Insurance Programme of Prince Edward Island involved only CAD 682 thousand;
- Programmes for Transition to Whole-farm assistance are designed to assist the sector in making a smooth transition to the whole-farm safety net system. For instance in 1998, Ontario introduced the 'Market Revenue Programme' and the 'Self-directed Risk Management Programme';
- other programmes are for example the 'Forage Write-Down Programme' in Alberta, 'contribution to the Farm Income Stabilisation Insurance' in Quebec and 'Big Game Damage Compensation' in Saskatchewan.

6.4.5 WTO compatibility of income stabilisation policies

Government financial participation in income insurance and income safety-net programmes must comply with various requirements to be exempted from reduction commitments (section 5.5.6). Most of Canada's income stabilisation programmes do not meet these requirements. Depending on the amount of support, these measures are regarded either as amber box policies or they fall under the 'de minimis' percentage. When they fall under the de minimis clause they are not included in the AMS calculations.

6.5 Input subsidies

6.5.1 Introduction

Input subsidies have been used quite commonly in Canada's agricultural policy. The most important subsidies were those on grain transportation. However, these subsidies are gradually phased out. In addition to transportation subsidies, credit to farmers is quite important.

6.5.2 Grain transportation

The most important subsidy has been that on transporting Western grain exports, known as the Western Grain Transpotation Act (WGTA). This subsidy originated in 1897 when a fixed nominal freight rate was established. It was reformed and capped in the mid 1980s with the enactment of the WGTA, whereby the federal government assumed the costs of the fixed rate at a level equivalent to the 1981 value of the subsidy benefit, about CAD 700 million, paid annually to the railways. This method of payment meant that grains in the Prairies were priced artificially high (as the export price f.o.b. Vancouver or Thunder Bay less the artificially low cost of freight). As a result, the WGTA discouraged feeding grain to livestock and further processing of grain because processed products did not receive the subsidy. The subsidy was in fact an export subsidy and hence subject to WTO commitments. The programme has been eliminated in 1995. Another, much smaller feed freight assistance programme (FFA) was also ended. To facilitate the adjustment to new policy instruments, facilitating subsidies were provided to producers and landowners. Remaining grain transportation issues include disposition of the 13,000 hopper cars owned by the government, and the scheduled 1999 review of the legislation that continues to regulate freight rates.

6.5.3 Credit

There is a broad variety of credit programmes, mostly provincial, which provide some form of subsidy to credit for farmers. The Farm Improvement and Marketing Cooperatives Loans Act (FIMCLA) is a federal government programme designed to increase the availability of loans for the purpose of the improvement and development of farms and the processing, distribution or marketing of farm products by cooperative associations. Under FIMCLA, the Minister is liable to pay the lender 95% of a loss sustained as a result of a loan made. FIMCLA enables lenders to incorporate its administration into their normal routine of business while providing government guaranteed loans to farmers and cooperatives.

There are two kinds of loans under FIMCLA: Farm Improvement Loans for individuals, corporations and partnerships; and Farm Marketing Cooperative Loans for cooperative associations. Both loans can be used for many different purposes such as the major repair, installation or overhaul of certain tools and machinery; the purchase of livestock; irrigation and reclamation of land; for the conservation of soil; for the purchase and planting of fruit trees etcetera. Ineligible purposes are for instance quota purchases and improvements to the family dwelling. The amount of loans to be consolidated may not exceed CAD 250,000 for Farm Improvement Loans and CAD 3 million for Farm Marketing Cooperative Loans.

The Farm Credit Corporation (FCC) is a federal Crown corporation that delivers programmes and services to farmers with financing needs. However, FCC does not offer grants or subsidies. FCC offers several loan products, securities for investment in agriculture, and other services (see Box 6.1).

6.5.4 WTO compatibility of input subsidies

In general, input subsidies are subject to reduction commitments. In fact, input subsidies could have trade-distorting effects or effects on production. All measures for which exemption is claimed, shall conform to the following basic criteria (Annex 2 of the URAA):

- the support shall be provided through a publicly-funded government programme) including government revenue foregone), not involving transfers from consumers;
- the support shall not have the effect of providing price support to producers; and policy-specific criteria (see for instance section 5.10.3).

Box 6.1 Products of the Farm Credit Corporation (FCC)

Product	Objective
	Loan products
Variable-Rate Loan	This loan is for any agricultural or farm-related purpose, such as land, buildings, quota, equipment or livestock, secured by real or personal property.
One-Year Convertible Loan	Provides the flexibility of short-term lending when rates are dropping, while allowing the borrower to switch to a longer term rate at any time should rates begin to rise.
Fixed Rate Loan	Offers peace of mind during periods of interest rate volatility, fixed payments and flexible repayment schedules can help to plan farm cash flow.
AgriStart - The Family Farm Loan - The 1-2-3 Grow Loan - The Payday Loan	Helps families transfer farming operations from one generation to another, as well as assisting developing farmers in starting or expanding their operations, through three products: The Family Farm Loan enables the developing farmer to finance the purchase of farm assets or transfer shares in a family farm business. The 1-2-3 Grow Loan provides financing with deferred payment options to farmers starting or expanding an enterprise that will have a reduced income stream for one to three years. The Payday Loan is designed for individuals with off-farm employment who are interested in starting or expanding a farm business.
Plant Now – Pay Later	Expanding a horticultural operation often results in a reduced income stream for a number of years. This loan is aimed at helping farmers through this period.
Farm Builder Construction Loan	Provides interim financing for any type of construction. No payments are required until the building project is completed and funds are disbursed as needed during the project.
Shared-Risk Mortgage	Cushions the impact of rising interest rates and provides stability by minimising exposure to fluctuating interest rates.
Blueberries	This programme is designed to further develop New Brunswick's wild blueberry and associated pollination industries. This initiative assists with land development and the addition of new beehives for wild blueberry pollination.
Aquaculture	Financing options are available for salmon, fresh water fish or shellfish operations in order to assist with expanding aquaculture businesses, purchasing barges, cages, nets, smelt, feed, tanks, hatcheries, processing equipment, construction costs, land and site leasing.
Forestry	This programme offers various loan products for buying forestry equipment, expanding existing forestry operation, buying land, or transacting a mega-merger.
	Investments
FCC Medium and Long-Term Notes	FCC's medium and long-term notes are issued daily at competitive market interest rates, for maturities ranging from one to 29 years. The notes are sold by investment dealers who act as agents for FCC and give investors the opportunity to invest in Canadian agriculture.
	Other Services
Land Sales and Leasing	FCC'S property division, Agri-Land Sales and Leasing, manages and markets most of FCC's land holdings and provides farmland management services for the owners and tenants.
Feeder Finance Programme	FCC finances feeder livestock through several livestock business alliances, as well as numerous feeder finance co-operatives across the country.
National Dealer Equipment Financing Programme	The programme assists dealers who do not have finance programmes available or who wish to give their customers an alternative to their current programme.
Agriculture Value-Added Programme	Through this programme Western Canadian agricultural value-added firms are assisted in accessing debt capital.

Source: AAFC/FCC, 1999.

However, in many cases the assistance level is low enough to fall under the de minimis level.

6.6 Trade policy

6.6.1 Introduction

Trade policy is an important element of Canada's agricultural policy. For some of the agricultural sectors (grains and oilseeds, red meats) it is very important to have access to foreign markets. To increase exports there is a great variety of services and programmes available (subsection 6.6.2). Trade policy from a domestic perspective is particularly important within the supply management sector, as its main element of protection has been a set of restrictive import quotas.

6.6.2 Export policy

There is a great variety of Canadian export assistance programmes. In this section, only the major AAFC programmes (focussed directly at agriculture) will be considered (see AAFC/ATS, 1999). In addition to the AFFC programmes, there are numerous provincial programmes and programmes of other departments and agencies.

Agri-Food Industry Market Strategies
Agri-Food Industry Market Strategies (AIMS) is an interdepartmental initiative to encourage Canadian agri-food industries to increase exports by the development and implementation of market responsive strategies. Through the availability of government human and financial resources, Canadian export associations should be able to develop and implement export market strategies. These strategies include elements such as: forecasting of market demand; evaluation of Canada's capability to satisfy this demand; determination of market goals; describing market and production development activities to be undertaken; and assessing the results of past activities.

Box 6.2 Agri-Food Trade 2000 Projects

Eligible AFT-2000 projects
Eligible projects include projects that are aimed at: formation and development of alliances and new industry associations; development of strategic plans; benchmarking; developing international standards and regulations which impact on Canadian Trade; increasing industry awareness of issues related to WTO negotiations; identifying market opportunities; support for pursuing market opportunities; markets information; or showcasing and promoting the Canadian sector and Canadian products.

The AFT 2000 Product Promotion Sub-Element
The AFT 2000 programme also contains a Product Promotion Sub-Element Programme. This AFT 2000 sub-element provides contributions on a cost shared basis usually through non-profit agri-food associations and alliances of exporters via the Agri-food Industry Market Strategies (AIMS) process for product promotions. Contributions will be available to agri-food associations and alliances representing exporters, and under exceptional circumstances directly to an exporter, where exporters indicate assistance is required to conduct promotions to meet competitors actions supported by their government's product promotion programmes.

Source: AAFC/FCC, 1999.

Agri-Food Trade 2000
Agri-Food Trade 2000 (AFT 2000) is a cost-shared contribution programme designed to support Canadian agri-food industry activities (projects) in areas of market readiness, market access and market development. The objective of the AFT 2000 programme is to increase sales of agriculture, food, and beverage products in domestic and foreign markets. In general, AFT 2000 funds do not exceed 50% of eligible project costs (see Box 6.2).

Agri-Food Trade Service
The Agri-Food Trade Service (ATS) was established to achieve the agri-food industry's goal of CAD 20 billion in agri-food exports by the year 2000. The objective of the ATS is to provide centralised access to international market information, export trade counselling and other export support activities.

Canadian Farm Business Management Programme
The Canadian Farm Business Management Programme (CFBMP) assists farmers to upgrade their business management skills in order to improve competitiveness both in domestic and global markets and to improve financial viability of their farming operations. CFBMP is amongst other activities concerned with: the development, testing, upgrading and introduction of farm business management development activities and the communication of farm business management information (for instance through the FBMInet, an internet information system for farmers).

Programme for Export Market Development
The Programme for Export Market Development (PEMD) provides financial assistance to agri-food associations to cost share the implementation of generic activities in acceptable long-term export market strategies. Generic trade development activities address challenges to the export of Canadian agri-food products in target markets. They are of the nature that benefit the sector as a whole rather than being for the primary benefit of a specific company. Generic trade development activities include gathering market information, obtaining access to markets, promoting the image, quality and dependability of Canadian supplies etcetera.

Government trade contacts
Important means of trade assistance are government trade contacts, both federal and provincial (see Box 6.3). These trade contacts primarily provide non-financial assistance such as market information and information on regulations. Moreover, these contacts can promote Canadian products abroad.

Trade policy as part of market regulation
In addition to the trade policies listed above, trade policy as an element within the framework of market regulations (section 6.3) should be mentioned. However, trade policy from that perspective is primarily aimed at serving the goals of market regulations, i.e. stabilising domestic demand and supply as well as prices.

Box 6.3 Government trade contacts for agricultural trade assistance

Federal trade contacts
Agriculture and Agri-Food Canada
Agri-Food Trade Service
Canadian Food Inspection Agency
Department of Foreign Affairs and International Trade
Canada's Trade Offices Abroad
Foreign Embassies in Canada
Canada Customs and Revenue Agency
Export Development Corporation
Federal regional contacts
Federal Regional Agencies
Atlantic Canada Opportunities Agency
Federal Office of Regional Development (Quebec)
Western Economic Diversification Canada
Provincial trade contacts
Various

6.6.3 WTO compatibility of Canadian trade policy

Export subsidies not listed in paragraph 1 of Article 9 of the Agreement on Agriculture (see Box 4.1), which is the case for the above export policies, are not subject to any reduction commitments. These measures shall in accordance with Article 10 of the URAA not be applied in a manner which results in, or which threatens to lead to, circumvention of export subsidy commitments; nor shall non-commercial transactions be used to circumvent such commitments.

Yet, in the opinion of the US and New Zealand Canada is circumventing WTO commitments. According to these countries, Canada's milk pricing system, that prices milk cheaper to processors when used in the export of manufactured dairy products than when used domestically, allows Canada to circumvent its export subsidy commitments. In March 1998, a WTO dispute settlement panel was established to hear complaints by the US and New Zealand about Canada's milk pricing system. Canada has notified to the WTO only those dairy product exports that have been subsidised with funds obtained from producers levies. Canadian marketing boards are also accused of a means of circumventing export subsidy commitments.

6.7 Agri-environmental policy

6.7.1 Introduction

The number of policy programmes on agri-environmental issues has been growing in the last years. Most of the spending on these programmes has come through federal-provincial programmes or directly from provincial initiatives. Expenditures usually are for a large number of small projects. In general, agri-environmental policy (as we call it here) includes: resource conservation, water quality and supply, land management, and sustainable rural development. For the conservation of biological diversity the AAFC has developed an 'Action Plan for Biodiversity'. Amongst others, the Community Pasture Programme and the Shelterbelt Programme contributed to the purposes of this plan. Important programmes for the conservation of water and soil are the National Soil and Water Conservation Programme and the Rural Water Development Programme. The main area for Canadian conservation spending is the so-called Prairie area that includes three provinces. Most conservation and environmental programmes are carried out by the Prairie Farm Rehabilitation Administration (PFRA).

6.7.2 PFRA Programmes

National Soil and Water Conservation Programme (NSWCP)
This programme is designed to support activities that promote the long-term stewardship and sustainable use of the environment and agricultural resource base. Funding for the NSWCP comes from the CAD 60-million-a-year Canadian Adaptation and Rural Development fund announced in the 1995 Federal Budget. NSWCP provides funds to eligible organisations that initiate soil and water conservation projects with a focus on water quality. Projects could include (but are not restricted to): scientific validation of best management practices at the farm level; development, communication, and implementation of innovative, affordable environmental technologies etcetera.

Community Pasture Programme
The Community Pasture Programme returns marginal agricultural land into permanent cover areas. During the summer these grasslands are used for grazing of cattle. The programme is designed to help producers strengthen their operations by providing pastures as well as a breeding service. Fees are charged for all services provided on the pastures.

Shelterbelt Programme
The Shelterbelt Programme promotes shelterbelt planting for soil conservation, snow management and crop stabilisation. PFRA's Shelterbelt centre in Saskatchewan produces trees and shrubs which are distributed (for free) to farmers and Conservation Boards for planting trees on farms and in fields, for the creation of wildlife habitat and for agri-forestry initiatives in Alberta, Saskatchewan, Manitoba and British Columbia.

Rural Water Development Programme (RWDP)
This programme focuses on removing constraints caused by drought and scarce water supplies on the prairies. The RWDP provides technical assistance to rural residents for the planning and development of water resources which contribute to the economic and/or environmental sustainability of the agricultural industry. Activities supported include test drilling for ground water data collection, water quality enhancement, dugouts, wells, small dams and pipelines.

Various

Several Federal-provincial agreements, such as the Agri-Food Innovation Fund (AFIF), focus on developing opportunities in emerging areas with a potential for growth. AFIF supports for example projects that investigate or demonstrate innovative technologies to improve the quality and supply of surface and groundwater for rural residents and agricultural enterprises. In addition, there are various centres such as the Saskatchewan Irrigation and Diversification Centre (SIDC), the Manitoba Crop Diversification Centre (MCDC), and other regional offices and research centres, which provide information and technical assistance on new and alternative uses for crops.

For environmental issues related to hog production, the government has launched the Hog Environmental Management Strategy. To adopt desired technology, low-interest loans or tax concessions could possibly be extended.

6.7.3 WTO compatibility of agri-environmental programmes

Agri-environmental policies are until now usually not considered as relevant to trade disputes. As environmental payments generally have only small or no effects on production and trade, they are categorised as green box policies (section 5.7.4). The same goes for Canadian agri-environmental support. However, it is possible that these policies will be under more discussion in the future, as the attention for environmental and sustainability issues has grown rapidly. Besides, the total expenditures involved are no longer small. Environmental programmes accounted for more than 5% of total green box expenditure (for the 36 WTO members who have notified this) in 1995. This is well above many other support categories, such as decoupled income support, regional assistance, disaster relief and marketing and promotion.

6.8 Rural policy and research, education and extension initiatives

6.8.1 Introduction

There are various AAFC initiatives on the field of rural development policy and research, education and extension. The most important one is probably the Canadian Adaptation and Rural Development (CARD) programme. Many of the Canadian agricultural research, education and extension activities are operated under the umbrella of the agri-environmental programmes (section 6.7) and the CARD fund programmes. Moreover, there is a Canadian Rural Information Service that provides information for rural Canadians on amongst other issues: childcare; entrepreneurship and opportunities for rural youth; obtaining credit for entrepreneurs who run very small businesses; recruitment of Rural Doctors; and rural tourism. Other initiatives of AAFC are the Rural Secretariat (see Box 6.4), the Canadian Rural Partnership (CRP), and the Prairie Farm Rehabilitation Administration. In this section we will only highlight the major initiatives.

6.8.2 The Canadian Adaptation and Rural Development (CARD) programme

The CARD programme was launched in 1995 for a four-year period. In this period, CARD has invested more than CAD 240 million in various projects (see Box 6.5). The CAD 60-million-a-year CARD fund focused on six policy priorities: research/innovation; human resources; environmental sustainability; food safety and quality; marketing; and rural development. In 1999, the CARD fund supported more then twenty national programmes and initiatives on the field of rural development.

After the first four-year period, the programme will be continued under CARD II. Funding for the environment will double under the new programme. Funding for research/innovation and for food safety will also increase substantially. As with the CARD I programme, CAD 35 million a year will go to national programmes and CAD 25 million a year will be allotted to regional CARD councils. Initial national funding for the next four years is as follows: CAD 33 million for innovation, CAD 26 million for developing human resources; CAD 23 million for environmental sustainability, CAD 19 million for food safety and quality; CAD 16 million for marketing; and CAD 4 million for rural development. In addition, there is CAD 16 million for farm debt mediation and farm consultation services.

Box 6.4 The Rural Secretariat

What is the Rural Secretariat?

The Rural Secretariat is a focal point for the Government of Canada to work in partnership with Canadians in rural and remote areas to build strong, dynamic communities. Located in Agriculture and Agri-Food Canada, it: provides leadership and co-ordination for the Canadian Rural Partnership; facilitates liaison and creation of partnerships around rural issues and priorities; and promotes dialogue between rural stakeholders and the federal govemment.

Key Activities

Key activities are: works with rural stakeholders through the Pilot Projects Initiative on community-based projects that promote sustainable development; seeks input of rural Canadians through the Rural Dialogue so the federal government can better understand and respond to local and regional issues; conducts an Information Outreach programme to promote awareness of federal programmes and services for rural Canadians; promotes use of the ' Rural Lens' to ensure that rural concerns are considered throughout the federal govemment; conducts and supports research and analysis of economic and social issues affecting rural Canada; coordinates a partnership approach on rural issues across the federal government, through the Interdepartmental Working Group and provincial and territorial Rural Teams; provides one-stop access to information of particular interest to rural Canadians through the Canadian Rural Information Service.

Clients and Partners

The Secretariat works with a broad range of clients and partners, including rural communities, organisations, associations and businesses; federal, provincial and local government departments and agencies; and other rural stakeholders in Canada.

Source: AAFC, 1999c.

6.8.3 Canadian Rural Partnership

The 1998 Federal Budget confirmed funding of CAD 20 million over four years for the Canadian Rural Partnership (CRP). The CRP is designed to support rural community development by adopting new approaches and practices to respond to rural development issues and concerns. In 1998/1999 the CRP tested 'new' ways of responding to rural issues through some 68 pilot projects that were built on existing rural networks and support greater grassroots participation in community-based development.

Box 6.5 Programmes supported through the CARD fund

Initiatives that are wholly or partially financed from the CARD fund	
Agri-Food Trade Service (ATS)	Provides a focal point for exporters, access to international market information/intelligence, export counselling and support programmes.
Canadian Agriculture Safety Programme (CASP)	The objective of CASP is to decrease the level of farm injuries and fatalities across Canada.
Canadian Farm Business Management Programme (CFBMP)	A partnership programme which includes producers, the provinces and the federal government, and that is aimed at assisting farmers to upgrade their business management skills leading to improved competitiveness both in domestic and global markets, and financial viability of their farming operations.
Canadian On-Farm Food Safety Programme (COFFSP)	COFFSP is a partnership between the federal government and national producer organisations.
4-H Programme	Provides support to national and provincial 4-H activities that focus on leadership, development, citizenship and skills development through programming, awards and recognition.
Farm Consultation Service (FCS)	Provides financial management counselling to farmers through two related services: pathfinding/referral and, direct, one-on-one financial management counselling.
Farm Debt Mediation Service (FDMS)	Provides insolvent farmers and their creditors with mediation services pursuant to the federal Farm Debt Mediation Act (FDMA) and Regulations to help them arrive at a mutually satisfactory arrangement.
National Hazard Analysis Critical Control Point (HACCP) Adaptation Contribution Programme	Provides financial assistance and training for the development and implementation of HACCP-based systems.
Matching Investment Initiative (MII)	MII is a way to increase collaborative research activity between the private sector and AAFC. Under the MII, the Department will match up to one-for-one industry R&D contributions to collaborative research projects.
Agriculture and Agri-Food Canada Scholarship Programme	This programme is intended to provide incentives to encourage more young Canadians to pursue advanced degrees to ensure there will be a sufficient supply of new scientists, engineers, economists and other professionals in the agri-food sector to replace those who will be retiring over the next decade.
Protein Oil and Starch (POS) Pilot Project	This is an applied research and development facility designed to facilitate the development of value-added products and technologies for agricultural commodities such as cereal grains, oilseeds, or speciality crops

A key component of the CRP is the Rural Dialogue. The objective of the Rural Dialogue is to better understand local and regional issues and to identify the appropriate role for the federal government in addressing key rural issues. The information on rural Canadian's issues and needs, is gathered trough for example regional workshops held across the country, and the Rural Dialogue On-Line Discussion Group. As a result of the Dialogue, the federal government produced the Federal Framework for Action in Rural Canada plan, on which rural policy programmes will be based partly.

6.8.4 PFRA programmes

Some of the PFRA initiatives are related to infrastructure, such as the Canada Agri-Infrastructure Programme (CAIP) and the Rural Water Development Programme. CAIP delivers funding to assist municipalities and the provincial governments in adjusting to transportation reform, including the elimination of the Western Grain Transportation Act (section 6.3). The Rural Water Development Programme provides supports to the agricultural industry in Saskatchewan by partially assisting rural clients financially with planning and development of water resources which contribute to rural growth and/or resource care.

6.8.5 Research, education and extension

The Research Branch is one of the eight branches into which the Canadian department for agriculture, the AAFC, is divided. The Research Branch is further subdivided into 18 research centres. Each of the Branch's 18 research centres has a specialised and strategic research focus of national importance. Their expertise reflects the type of industry in the agro-ecological region where they are located. The centres operate within a network of scientific expertise.

In addition to AAFC's Research Branch there is the NSERC (the Natural Sciences and Engineering Research Council of Canada). The NSERC is Canada's national instrument for making strategic investments in its capability in science and technology. NSERC supports both basic university research through research grants and project research through partnerships of universities with industry, as well as the advanced training of highly qualified people in both areas.

The Agriculture and Agri-Food Canada (AAFC)/Natural Science and Engineering Research Council (NSERC) Research Partnerships Programme
This is a joint programme of the AFFC and the NSERC that provides grants to universities to conduct research in collaboration with Canadian companies. AAFC, NSERC and industry typically split the costs of the projects equally three ways. The idea is to boost industry's role in funding research.

Matching Investment Initiative (MII)
The Matching Investment Initiative is a way to increase collaborative research activity between the private sector and Agriculture and Agri-Food Canada (see Box 6.5).

Extension and education activities
Extension and education/training activities are generally carried out under agri-environmental programmes, rural development programmes, or programmes/services of the research institutes. To increase Canadians' awareness (and education) of the agri-food industry, AAFC has undertaken several initiatives. One of these initiatives is the establishment of the Canadian Agriculture and Food Celebration (CAFS). CAFS builds upon a long-standing federal, provincial and territorial tradition of developing awareness activities to help Canadians understand and appreciate the agri-food sector. These activities include brochures, forums, farm tours, lunch meetings with the Minister, festivals, radio spots, etcetera.

6.8.6 WTO compatibility of rural policy and research, education and extension initiatives

Canadian rural policy initiatives include a variety of different types of programmes with unique approaches that benefit both producers and the rural economy. Most programmes and services do not directly subsidise producers or specific commodities' production. In general, these initiatives fall under the green box 'general services' category of WTO policies that are exempted from reduction commitments.

Notwithstanding, the costs of constructing irrigation, roads, and other production-cost influencing structures in rural areas are reduced because of the infrastructure policies. In a certain sense that also applies for training, information, consulting and other facilities. However, the total effect may be minimal.

7. Agricultural support in Australia

7.1 Introduction

As pointed out in chapter 3, Australian support to the agricultural sector is low. The Total Support Estimate in Australia is only 0.49% of the country's GDP. For comparison: the EU has a Total Support Estimate of 1.36% (see Table 3.1). Nonetheless, some support is given to the Australian agricultural sector, of which the most important measures are discussed in this chapter.

In Australia almost a third of total support is spent on general services. Within the general services, research and development account for the largest share of support. Other general services that receive support are inspection services, infrastructure, and marketing and promotion. Agricultural support can except through general services also be given directly to farmers. In Australia direct provisions are made through market price support and direct payments based on output, input use, overall farm income etcetera.

Before the individual instruments will be dealt with, we will depict the agricultural policy framework in which these instruments developed (section 7.2). After that, we will discuss the individual support measures applied by Australia, starting with marketing boards, as they have always been an important feature of Australia's agricultural policy (section 7.3). Next, we will deal with farm support that is more or less directed to individual farm businesses (section 7.4). Subsequently, Australia's rural development policy (section 7.5) and natural resource policy (section 7.6) will be described shortly. In the last section, an important element of Australia's agricultural policy, i.e. export support, is at the forefront.

7.2 Policy framework

Agriculture is the mainstay of Australia's economy. The agricultural sector generates a quarter of Australia's export income and provides most of the raw materials that are needed for the processing industry. Furthermore, the agro-food industry is the nation's largest manufacturing sector and a substantial employer. In the nineties, the Australian Federal Government felt that the Australian agriculture had to be encouraged to pursue new market opportunities, which were emerging as a result of the relaxation of overseas barriers to trade (AFFA, 1998a). Therefore, the Australian government developed an overall strategy in order to make farming more competitive, sustainable and profitable. This strategy is being implemented at three levels:

Level 1: This first level involves the creation of solid economic foundations. By balancing the Budget and by implementing economic reforms, the Government is delivering lower interest rates for farm businesses and a more flexible labour market, and is preparing the ground major the tax reform.

Level 2: The second level consists of investing resources where it matters. The Government has ensured that key activities in the primary industries portfolio are well provided with resources and contribute towards achieving its objectives for the sector. It has, for example, provided funds for a strong rural R&D programme; provided support for sustainable agriculture through *the National Heritage Trust*; supported exports through the 'Supermarket to Asia initiative' and invested more resources in quarantine. The programmes under the *Agriculture - Advancing Australia (AAA)* package have to deliver benefits across the entire farm sector.

Level 3: This level implies industry control of industry matters. The Government has been working closely with individual industries such as wool, meat and wheat to remove undesirable statutory controls, particularly in marketing, and to allow each industry to take direct responsibility for determining its operations (AFFA, 1998a).

The individual agricultural support measures can be divided into two major packages of agricultural policy. The first one is the *Agriculture Advancing Australia* (AAA) initiative. AAA was launched by the Federal Government in September 1997 with the aim to increase profitability, competitiveness and sustainability of the farm sector and to encourage communities and farmers to be more innovative and financially self-reliant. For these purposes, the Australian government has made available USD 525 million over a four-year period. The major objectives of the AAA –package are:

- to help individual farm businesses profit from change;
- to ensure that the farm sector has access to an adequate welfare safety net;
- to provide incentives for ongoing farm adjustment;
- to encourage social and economic development in rural areas (AFFA, 1998a).

The second main package of Australia's agricultural policy is the *National Heritage Trust* (NHT) initiative. NHT is the largest environmental policy effort ever undertaken by an Australian government. The programmes of NHT play a role in the development of sustainable agriculture and natural resource management, as well as the protection of biodiversity through improved management and delivery of resources (NHT, 1999).

7.3 Marketing Boards

7.3.1 Introduction

Marketing boards fall under the definition of State Trading Enterprises (STEs). In world exports of agricultural commodities four STEs dominate. Two of them are Australian marketing boards: the Australian Wheat Board and the Queensland Sugar Corporation. We will take a narrower look at these two Australian marketing boards. Next to these two marketing boards, there are some other minor marketing boards in Australia (see Box 7.1).

7.3.2 The Australian Wheat Board

The Australian Wheat Board (AWB) was established under the National Security Act of 1939 ' to purchase, sell, and handle, store, and ship wheat' . Originally, the AWB was formed to handle wheat marketing as a wartime emergency. The AWB gave Australian producers an experience of single-desk selling. The commercial strength and stability of this arrangement was widely acknowledged and the role of the AWB has been maintained as a means of competing in a variety of export markets. The AWB continues as the sole exporter of wheat from Australia and the major seller on the deregulated domestic market. Besides export control, the AWB uses a price pooling system for 45 grades and classes of wheat.

The Government guaranteed loans for the AWB until July 1, 1999 (USDA, 1997). As of July 1 1999, the AWB has been converted into a private corporation. Hence, it needs to seek funding in international financial markets, while maintaining its exclusive export authority. As the sole controller of Australia's wheat export, the AWB carries the collective risk of international price and financial exposures on behalf of Australia's wheat growers (AWB, 1999).

Box 7.1 Australia's marketing boards

Marketing Boards:	Export monopoly:
Australian Wheat Board	yes
Queensland Sugar Corporation	yes
Australian Meat and Livestock Corporation	no
Australian Dairy Corporation	no
Wool international	no
Australian Barley Board	yes

7.3.3 The Queensland Sugar Corporation

The Queensland Sugar Corporation (QSC) is a state-level marketing board. It operates under the authority of Australia's Queensland Sugar Industry Act of 1991, which took effect on July 15, 1991. Initially, the QSC was established as the Queensland Sugar Board in 1923. The QSC is financed by producers. The QSC procures Queensland's total produce of raw sugar, which it markets to refineries. Domestic price support is arranged by pool pricing for raw sugar by grade. The government does not underwrite the pool losses (USDA, 1997). QSC has the exclusive right to export Queenland's raw sugar. Nevertheless, some other states export small amounts of sugar.

7.3.4 WTO compatibility of Australia's marketing boards

The WTO defines STEs as governmental and non-governmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in exercise of which they influence through purchases or sales the level or the direction of imports or exports (USDA, 1998a). In the GATT Article XVII STEs are recognised as legal enterprises. However, they may not discriminate among importers or exporters when they make purchases or sales. Furthermore, STEs must act ' in accordance with commercial considerations' . Hence, countries must notify their STEs to the WTO. Generally, apart from that they have to be notified to the WTO, STEs are not subject to any WTO commitments.

The fundamental concerns with activities of STEs are that such entities have been granted exclusive or special rights or privileges that contribute to distortions in international agricultural trade. Critics of state trading argue that STEs' lack of price transparency could be used to mask export subsidies and import tariffs. It also is argued that statutory authorities provide STEs with opportunities unavailable to commercial firms that compete against them (USDA, 1998b).

7.4 Farm sector assistance

7.4.1 Introduction

Most policies directed at individual farms fit into the AAA strategy. These policy initiatives will be dealt with in the subsections 7.4.2 to 7.4.7. Subsequently, we will discuss two initiatives that do not fall under the AAA strategy: the PMP (subsection 7.4.8) and the DMSS scheme (subsection 7.4.9).

In general, the measures discussed in this section are aimed at helping farmers to improve the competitiveness of their businesses, providing a welfare safety net, and assisting farmers in order to encourage structural adjustment in the farming sector. These objectives are to be achieved by improving farmers' skills, providing income support, providing risk management tools etcetera.

7.4.2 Farm Business Improvement Programme (FarmBis)

FarmBis is a grant programme assisting farmers to improve the management of their businesses. FarmBis provides direct financial assistance towards the costs of programmes and activities in which farmers participate. Participants have to contribute to the costs of training as well, in order to ensure their commitment and that training is relevant to them. FarmBis activities include support for management planning, business and financial advice, marketing, risk management, etcetera.

Funding for the FarmBis programme is on a 50:50 basis between the Federal Government and the States. While FarmBis is a Federal initiative, it is designed to be a partnership between the Federal government, the States, industry, local farmers and community groups, and other key stakeholders. FarmBis is funded by both the AAA-package and the NHT.

7.4.3 Farm Management Deposit Scheme

FMD is a tax-linked saving scheme that helps farmers deal with uneven income streams. It has a full commercial basis by financial institutions. The FMD provides tax concessions to farmers who are able to set aside funds to help them over future financial crises. Deposits into the scheme will be tax deductible in the year of deposit and taxable only in the year of withdrawal. The scheme is capped at USD 300,000 per taxpayer.

7.4.4 Exceptional Circumstances assistance

Exceptional Circumstances assistance is designed to provide short term targeted support to assist long term viable farm businesses to cope with the adverse impacts of exceptional events, including drought. Exceptional Circumstances assistance is provided by two ways. First, there are interest rate subsidies. However, there will be a gradual phase down in the level of interest rate subsidies available in exceptional circumstances from 100% in 1998-99 to 50% in 2001-02. Secondly, there is the Exceptional Circumstances Relief Payment Scheme (ECRP) that provides farm families with income support and special access to Health Care Cards, Family Payments and Youth Allowance (formerly AUSTUDY).

7.4.5 Farm Family Restart Scheme (FFRS)

The FFRS replaced the former Farm Household Support Scheme. Debts of some USD 5.1 million incurred by farmers under the former scheme have been waived away by the government (USDA, 1997). The FFRS provides welfare support to low income farmers and their families who are experiencing financial hardship and who cannot borrow further against their assets. Moreover, FFRS provides adjustment assistance to farm families to make decisions about their future in the industry. FFRS provides income support for a maximum period of one year. Farmers on income support will be required to seek independent professional advice on the financial viability of the farm and to develop a plan for further advice that will assist them in making decisions. After this initial advice session farmers may also obtain further financial, business, career, personal or legal advice to assist them to make a decision regarding their future.

7.4.6 Retirement Assistance for Farmers Scheme (RAFS)

The RAFS initiative forms part of the AAA-package and applies as from 15 September 1997. RAFS provides assistance to allow older farmers to transfer ownership of the family farm to a younger generation that is already working on the property. The objectives of RAFS are achieved through two ways. In the first place, RAFS gives pensioned-aged farmers the opportunity to retire and have immediate access to the Age Pension rather than the five-year wait under the current law. Secondly, RAFS-assistance exists of a three year moratorium on gifting provisions to allow the transfer of assets up to USD 500,000 per farm to be gifted (USDA, 1997). The scheme is also open to those who transferred their farms in the preceding five years (AFFA, 1998d).

7.4.7 Farmsafe Australia

Farmsafe Australia is an association that facilitates farm safety action across all agricultural industries in Australia. The programmes and activities of Farmsafe Australia are based on the idea that the key responsibility for farm safety rests primarily with individual farmers, farm families and farm workers. Programmes and activities of Farmsafe Australia include: education about health and safety through workshops, short courses and attendance at field days; information about health and safety on the farm on request; development of resource materials about health and safety on the farm; monitoring and research to identify the nature and extent of farm injury; and coordination of farm safety activities between states and agencies.

7.4.8 Property Management Planning (PMP)

The PMP initiative started in 1993. The PMP-programme involves incorporating all of a business's decision-making processes, including risk management, into an overall business plan. Therefore, farmers must learn to develop a flexible approach for managing their business and to develop a culture of continuous learning. PMP helps Australian farm businesses realise their potential and manage change and risk by assisting producers to review, assess and modify their operations as new circumstances arise (AFFA, 1998c). The principles of PMP can be used to improve profitability and to use resources more efficiently. The PMP-campaign is a joint Federal and State government initiative, but it does not form part of the AAA-package.

7.4.9 Domestic Market Support Scheme (DMSS)

Dairy has been the only sector in Australia that received significant government support. State governments set farm gate prices for fresh milk and operated a mix of pooling and quota arrangements. The DMSS includes a levy-system. Levies are paid by manufacturers on manufacturing milk. Manufacturers receive a rebate on milk for dairy processing for the export market and pass the levy on to consumers for products sold on the domestic market. The funds raised by the levy are used to assist milk manufacturers. The DMSS is to be terminated in the year 2000.

7.4.10 WTO compatibility of farm sector assistance

Most of Australia's farm support programmes fall under green box policies and hence, are not subject to any reduction commitments. This is because they mainly consists of extension and advisory services and structural aid. These support measures are considered to have only minor effects on production and trade of agricultural products. In addition, they meet the policy-specific criteria, as described in Annex 2 of the Uruguay Round Agreement for Agriculture. Some of the support measures, such as the Safety nets, the Exceptional Circumstance assistance, the Farm Family Restart Scheme, and the Domestic Market Support Scheme (partly) fall under amber box policies. However, because of the low level of support, these policies are qualified as 'de minimis', Consequently, they do not have to be included in the AMS calculations.

7.5 Rural development programmes

7.5.1 Introduction

Most of Australia's rural development programmes fall under the AAA strategy. These policies are aimed at promoting economic and social development of rural areas. According to AFFA, rural community people should be skilled and financially self-reliant, and equipped to turn uncertainty and change into opportunity and prosperity. To achieve this, communities and industry must be provided with access to modern technology, good management skills, information, transport, communications, education and community services. Consequently, research, training and the provision of information are key elements in most of the programmes. We will not discuss the available programmes in this section.

The Regional Telecommunications Infrastructure Fund (RTIF) is administered by the Department of Communications and the Arts. This fund, also know as 'Networking the Nation' provides funding for regional, rural and remote communities. The Rural Communities Programme (subsection 7.5.2) also contains an information technology component. The Rural Communities Programme is the main rural development initiative of (among others) AFFA. Another major rural development programme, the Rural Partnership Programme, will be discussed in subsection 7.5.3.

7.5.2 Rural Community Programme (RCP)

The RCP provides grants for community development. The grants are intended at encouraging rural based industries to work together at the regional level in developing business plans to further regional growth. The programme provides a pool of funds from which applicants can apply for a grant to support any project that falls into one or more of the following categories: Community Planning, Financial Counselling, Information Provision, Information Services Technology, and Community Development (see Box 7.2).

Grants may be available for other projects with a national significance that have clear benefits at the farm or community level. Priority is given to projects that focus on small communities. Only incorporated bodies can apply for grants. Individuals, commercial organisations or bodies established for profit-making purposes are not eligible for funding.

7.5.3 The Rural Partnership Programme (RPP)

The Rural Partnerschip Programme is designed to give rural communities the opportunity to develop and implement strategies for addressing the economic development, structural adjustment, natural resource management and social issues in their region in an integrated way. Funding is available for twelve regional strategies. Individual Strategies comprise a range of measures, designed in consultation with the community and Commonwealth and

State Governments. A number of Strategies provide funds to landholders for business planning, training, structural adjustment and natural resource management activities.

7.5.4 WTO compatibility of rural development programmes

Rural development policies, which only have minor effects on farmers' production decisions, are categorised as green box policies if they meet the policy-specific criteria for exempt support measures (section 5.11.3). Although rural development programmes comply with the criteria, these policies may in spite of all that influence production cost (and hence production decisions). This is because government services reduce certain facilities costs. However, the effect of these services may be minimal if the criteria for eligibility are sufficiently limited to a small enough share of the total farm sector. In addition, these support measures do not directly subsidise specific' commodities production.

Box 7.2 Projects eligible to the Rural Community Programme

Financial Counselling
Community groups can apply for a grant to provide financial counselling services for farmers, small business operators and townspeople who are experiencing financial difficulty. Financial counselling projects are managed and administered by AFFA.

Community Planning
All applicants are encouraged to undertake a planning process within their communities. This may include community surveys, workshops, the hire of facilitators, etcetera. When applications for financial counselling, information provision, information services technology and community development projects are assessed, significant emphasis will be placed on the priority they have within the community plan.

Information Provision
Community groups can apply for a grant to provide a range of government information services. This could take the form of community groups, who wish to set up such a service, being provided with access to a Commonwealth Government information database.

Information Services Technology
Community groups can apply for a grant to assist in delivering a range of effective up-to-date information services technology. Grants will be made to assist communities to improve access to on-line services, data processing, training and distance education opportunities etcetera.

Community Development
Grants will be provided for community based projects which may include men's and women's health projects, vocational training courses, newsletter production, information seminars etcetera.

Source: AFFA, 1999.

7.6 Natural Heritage Trust (NHT) programmes

NHT initiatives

The NHT is jointly administered by the AFFA and Environment Australia (the department on environmental issues). Through the NHT, the government will invest USD 1.25 billion over five years. There are many programmes funded by NHT, focussing on five major themes of land, vegetation, rivers, biodiversity and coasts and marine (Table 7.1).

One of the major programmes under the NHT is the National Landcare Programme (NLP). Landcare is a locally based approach to protect the environment and Australia's resources. The National Landcare Programme supports projects that contribute to an integrated programme of sustainable management of land, water, vegetation and biological diversity.

Table 7.1 Natural Heritage Trust programmes and funding for the period 1996/1997-2000/2001 for AFFA managed programmes

The programmes funded under the Natural Heritage Trust	Funding (in USD million)
Farm Forestry Programme	41,0
Fisheries Action Programme	10,4
Murray-Darling 2001	63,0
National Feral Animal Control Programme	6,5
National Landcare Programme	268,3
National Land and Water Resources Audit	35,2
National Rivercare Programme	69,3
National Weeds Programme	15,1
National Reserve System Programme	-
National Wetlands Programme	-
Riverworks Tasmania	-
Waste Management Awareness Programme	-
Waterwatch Australia	-
World Heritage Area Management	-
Air Pollution in Major Cities	-
Bushcare: The National Vegetation Initiative	-
Cape York Natural Heritage Trust Plan	-
Coasts and Clean Seas Initiative	-
Endangered Species Programme	-
FarmBis - Farm Business Improvement Programme	-

Source: NHT, 1999.

WTO compatibility of NHT programmes

Agri-environmental programmes are usually not considered as relevant to trade disputes, as their effects on agricultural production and trade are usually very small. But, to be exempted from domestic support reductions, payments under environmental programmes shall meet the following two criteria (Annex 2, Paragraph 12, URAA):

- eligibility for environmental payments shall be determined as part of a clearly-defined government environmental or conservation programme and be dependent on the fulfilment of specific conditions under the government programme, including conditions related to production methods or inputs;
- the amount of payments shall be limited to the extra costs or loss of income involved in complying with the government programme.

As far as can be judged from here, Australia's natural resource policies do meet the green box criteria above.

7.7 Export support

7.7.1 Introduction

Export support is a major element of Australia's agricultural policy. Since agricultural exports are highly important to Australia, there are many programmes and government agencies to foster growth of Australia's export competitive industries. In particular the Asian market has gained increasing attention. A major initiative to increase agri-food exports to Asia is the Supermarket To Asia Strategy, which includes a broad variety of specific initiatives.

7.7.2 The Supermarket To Asia Strategy

Australia's prime Minister's Supermarket to Asia Council has developed an 'action plan' with the goal 'to grow Australian agri-food exports to Asia from USD 10 billion to USD 16 billion by the 2001'. Furthermore, the strategy has to encourage at least another 2,000 agri-food businesses to become active exporters of food to Asia. The Australian government has allocated USD 23.7 million over three years from 1999/2000 to support the strategy. Specific initiatives within the strategy include: regional export forums; establishment of air and sea freight export councils; dissemination of agri-food 'success stories' achieved through innovative business strategies; working with Asian counterpart agencies towards the removal of technical market access barriers to Australian agri-food exports; the Delicatessen Programme; supply chain management; and, the electronic marketing of food to Asia.

7.7.3 Australian Trade Commission (Austrade)

Austrade is the Federal Government's export and investment facilitation agency. It provides advice to companies on which overseas markets hold the highest sales potential for their products, on how they can build a presence in these markets, and what sort of practical and financial help is available. In 1998 for example, Austrade has begun a programme of conducting seminars around the country to advise firms on how to respond to the Asian crisis. Austrade is also providing advice on opportunities for Australians to make acquisitions in the (Asian) region because of the financial difficulties. Finally, Austrade has drawn on long standing programmes such as the Export Market Development Grants scheme (subsection 7.7.7) to offer free training and export assistance to small and medium sized firms.

7.7.4 Export Finance Insurance Corporation (EFIC)

EFIC can offer export credit insurance, usually for up to 180 days or less, through its commercial window. This facility is subject to credit worthiness assessments and is available for all exports, both agriculture and manufactures. In cases where the risk is too high, or where the acceptance of a contract would unbalance their portfolio, insurance can be made available through a special ' national interest' window. Use of this window requires a

Ministerial decision or, as was the case with the response to the Asian crisis, a Cabinet decision that the extension of additional insurance cover would be in the national interest.
In 1998, the Australian Government has announced three specific portions of additional credit insurance cover under the national interest window. The first announcement was a USD 300 million provision for Korea. The second announcement was a programme for Indonesia with the specific objective of preventing the US from increasing their market share for cotton exports. This announcement did not set a cap on the amount available. Specific decisions on offering cover are made on a case by case basis. Finally the Prime Minister has announced a special USD 380 million export credit insurance cover specifically for wheat exports to Indonesia.

7.7.5 Australian Quarantine and Inspection Service (AQIS)

The AQIS is responsible for carrying out export and import inspection. Related to exporting, AQIS provides export certification and market access assistance. In addition to that, it has negotiated 160 new market opportunities for Australian agricultural goods. To ensure current levels of market access were not lost, significant effort was also put into improving access to 51 of Australia's existing markets and maintaining a further 181 existing markets that were under threat (AQIS, 1999).

7.7.6 Market Development Task Force (MDTF)

The MDTF represents a whole-of-government effort to open world markets for exports of Australian goods and services. The MDTF focuses on high priority, short-term opportunities in 27 markets, divided in two groupings. Each market is reviewed twice a year. The first group contains Japan, the Republic of Korea, China, Hon Kong, Taiwan, European Union, France, Germany, Italy, the United Kingdom, Russia, Central and Eastern Europe, Turkey, and Pacific Island Countries. The Second group includes Indonesia, Malaysia, the Philippines, Singapore, India, Thailand, Vietnam, the US, Canada, Mexico, South America, Gulf States/Middle East, and Southern Africa. Ways in which the MDTF tries to accomplish open world markets are: pursuing improved markets access as well for agricultural products specifically as for a range of commodities; assisting Australian companies to secure major infrastructure contracts; promoting a wide range of goods and services; identifying investment opportunities; and working to attract increased investment into Australia. (DFAT, 1999).

7.7.7 Export Market Development Grant Scheme (EMDG)

The Export Market Development Grant (EMDG) scheme is Australian government's principal export finance assistance programme. Administered by Austrade, EMDG helps small and medium Australian exporters to locate and develop overseas markets. The USD 150 million-dollar scheme provides a cash reimbursement of up to 50% for overseas marketing and promotional costs incurred to create export revenue. Eligible expenses are overseas representation (i.e. agent and distributor fees), overseas market visits, communications, free samples, trade fairs, public relations, promoting material, advertising and short-term marketing consultants.

7.7.8 The Australian Customs Service (ACS)

The ACS facilitates trade by administering export controls for prohibited and regulated exports and gathers information on the nature and volume of exports to help the government and the industry. It advises exporters on whether permits are required for their goods and helps to determine the appropriate classification for those goods.

7.7.9 The Food and Fibre Chains programme

The Food and Fibre Chains programme provides practical assistance to food and fibre exporters who seek to adopt modern chain management practices into their businesses. Specifically, the programme will provide matching funding for select projects designed to improve relationships, linkages and efficiencies with key export 'chain' participants such as growers, buyers, processors and service providers.

7.7.10 Miscellaneous

There are several other initiatives to support Australia's exports and the agri-food industry. Commodity marketing corporations for example, are government business enterprises that are managed in close cooperation with national industry councils to foster and develop food production and export industries in particular sectors. To different degrees, the corporations also promote and market food crops on a commercial basis in export markets. These corporations, also referred to as 'marketing boards', are discussed in section 7.3. Next to these corporations there are research and development corporations funded by both the government and the industry to manage research and development for rural industries.

7.7.11 WTO compatibility of Australian export support

The types of export subsidies that are subject to reduction commitments are described in article 9 of the URAA (see chapter 4 of this report). Australia's export assistance measures all seem to fall outside the scope of this article. The provision of export finance insurance falls under Article 10 of the URAA, which says that 'Members undertake to work toward the development of internationally agreed disciplines to govern the provision of export credits, export credit guarantees or insurance programmes and, after agreement on such disciplines, to provide export credits, export credit guarantees or insurance programmes only in conformity therewith'. However, there is still no agreement among the WTO members on the provision of export credit guarantees. Export credit guarantees expand importers' demand for agricultural products when importers have difficulty obtaining foreign exchange. However, as export subsidies are subject to reductions under the WTO, the competitive aspects of credit guarantees have come under increasing scrutiny. After all, export credit guarantees are grounds for competition among exporters.

8. Agricultural support in New Zealand

8.1 Introduction

The New Zealand government follows a market led policy approach. Sector specific policies are rare since the removal of virtually all agricultural subsidies and concessions following the election of the Labour Party to power in 1984. Few shifts in New Zealand's economic policy approach have occurred following the national elections in 1996. Statutory producer boards still influence over 80% of New Zealand's agricultural exports. However, the New Zealand government has indicated to cut off the statutory backing of these boards. The few measures of assistance to the sector are concentrated in research and extension, animal health and quarantine, and adverse event assistance (Sandrey, 1992). The next section addresses the most striking feature of New Zealand's agricultural policy, i.e. the producer boards (section 8.2). Subsequently, some other forms of assistance to the agricultural sector are dealt with.

8.2 Producer Boards

8.2.1 New Zealand's producer boards

Most of New Zealand's agricultural and horticultural exports are in some way controlled or influenced by producer boards or licensing authorities (Figure 8.1). These organisations are creatures of statute but the New Zealand government has indicated that it intends to remove the statutory backing of agriculture's producers boards, although no timetable is set (OECD, 1999).

There are three different types of producer boards in New Zealand (see MAF, 1996). The first type is the export trading board. Boards under this type have export powers. However, these boards do not have statutory powers at the New Zealand market. Examples of these boards are the New Zealand Diary Board, the New Zealand Apple and Pear Marketing Board and the New Zealand Kiwifruit Marketing Board.

The second type of producer boards are those with both export and domestic market (monopoly) powers, such as the New Zealand Hop Marketing Board and the New Zealand Raspberry Marketing Council.

The non-trading boards form the third type of boards. These boards are not directly involved in the purchase or sale of commodities. Their roles are mainly directed at the areas of licensing exporters, promotion and market development, research, industry support, and quality control. However, in the past some of these non-trading boards have been involved in export trading. The non-trading boards have varying degrees of regulatory and control powers, and have other powers that enable them to carry out industry support and leadership functions (MAF, 1996). The five non-trading boards in New Zealand are the

New Zealand Wool Board, the New Zealand Meat Producers Board, the Game Industry Board, the New Zealand Pork Industry Board and the New Zealand Horticulture Export Authority.

	Export powers	Domestic market powers	Other powers
Dairy Board	Yes	The Board operates a price equalisation scheme between domestic and export markets for certain products	Retain money to maintain reserves, and control dairy livestock breeding
Apple and Pear marketing boars	Yes	No	Establish standards, and impose levies on fruit acquired
Kiwifruit marketing board	Yes	No	Establish standards, and retain money to maintain reserves
Raspberry marketing council	Yes	Powers to fix quotas for supply to manufacturers and resellers	Undertake production and market, and impose levies on growers
Hop Marketing board	Yes	Subject to ministerial approval the board controls the domestic hop industry including imports	Establish standards, arrange shipping and storage, and register producers
Wool Board	Unused powers	No	Product promotion, licensing exporters, certifying, establish standards, control freight and storage, impose levies on wool sold
Meat Producers Board	Unused powers	No	Licensing exporters, product promotion, establish grading standards, arrange shipping, impose levies on stocks slaughtered
Game Industry Board	No	No	Impose levies on deer and deer products, undertake and control research, product promotion
Pork Industry Board	No	The board is actively involved with product promotion	Impose a levy on pigmeat producers
Horticulture Export Authority	Not directly	No	Promote export marketing, licensing exports, market research, latent power to levy

Figure 8.1 New Zealand's producer boards and their primary powers
Source: MAF, 1996.

8.2.2 Producer board reforms in the 1990s

As from the late 1980s, producer boards have been reformed. These changes in producer board legislation were focussed on the withdrawal of direct Government involvement in the industries. Alterations to the boards in the 1990s were mainly directed at improving the accountability of the boards to the producers who fund them, and focusing their objects, functions and powers to meet future needs. The nature of these changes has meant that initiatives are coming from both the government and the boards and industries.

In 1996, New Zealand's government introduced a Producer Board Acts Reform Bill. The Bill aims to replace the three Acts governing the Meat, Wool an Pork Boards with three completely new Acts. The changes are in line with the general move to make boards more independent of the government and more accountable to producers.

8.2.3 The New Zealand Dairy Board

The New Zealand Dairy Board (NZDB) is the world's second largest State Trading Enterprise (STE). A closer look at the NZDB is relevant because of its major role in international dairy trade. The NZDB was established in the period 1925-1927 and reconstituted under the Dairy Board Act of 1961 to 'maximise the income of New Zealand dairy farmers through excellence in the global marketing of dairy products' (USDA, 1997).

The Board is producer-financed and has monopoly export powers for dairy product exports. Furthermore, it is authorised to set conditions under which companies may export independently. The Board operates in cooperation with the dairy companies to ensure that their manufacturing programmes match the demands of the international market. It also integrates the industry's shipping, packaging, transport, storage and quality control needs. Moreover, it provides necessary support services in the form of financial facilities, data processing, livestock improvement and administration.

Besides export powers, the NZDB has some control over the processing of agricultural commodities. The NZDB has contracts for specific export quantities with its member cooperatives. The production of preferred dairy products is encouraged through a system of premiums and discounts, and by establishing joint ventures and subsidiaries in many countries to further process products tailored to their specific markets.

The payments of the NZDB to member cooperatives are based on the manufacturing cost of the products supplied to the Board and the forecasted milk-fat and protein value of the products. Member cooperatives may receive premiums for production of highly demanded products, or their payments may be discounted if the quality of the product delivered is below the contract specification (USDA, 1997).

8.2.4 WTO compatibility of New Zealand's Producer boards

As early as 1947, the contracting parties of the GATT recognised that State Trading Enterprises, such as New Zealand's producer boards that have export powers, could distort global trade. GATT Article XVII recognises STEs as legal enterprises, but requires that they do not discriminate among importers or exporters when they make purchases or sales and that STEs act 'in accordance with commercial considerations'. Countries must report information about their STEs to the WTO. The WTO defines STEs as 'governmental and non-governmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in the exercise of which they influence through their purchase or sales the level or direction of imports or exports'.

New Zealand's Dairy Board has because of its export monopoly been the subject some discussion in recent years. The lack of transparency in the pricing and operational activities of STEs has caused some WTO members to express concerns that other WTO members could use STEs to circumvent WTO commitments on export subsidies, market access, and domestic support. It is also argued that statutory authorities provide STEs with opportunities unavailable to commercial firms that compete against them. Hence, some WTO members want STEs to be on the agenda for the Millennium Round of WTO negotiations. They want the disciplines on non-competitive behaviour practised by STEs to be improved. Also because of the WTO accession negotiations of China and other countries, in which STEs play a large role in exporting or importing and could perhaps mask export subsidies and import barriers.

Box 8.1 New proposals for restructuring New Zealand's dairy sector

Legislation to deregulate New Zealand's dairy industry was introduced to Parliament under urgency on Wednesday July 15, 1999, after negotiations between the Dairy Board and the Government concluded on Tuesday July 14, 1999. The Dairy Industry Restructuring Bill provides for commercial levies, tax, quotas and industry issues required by the new mega-cooperative proposed to meet Government deregulation and competition requirements.

The restructuring Bill includes proposals on:

- preparing the way for the creation of a single, integrated co-operative dairy company which would process and market an estimated 95% of New Zealand milk. Dairy farmers would own the mega-cooperative directly. The Dairy Board would be reconstituted as a commercial company, and become a 100% owned subsidiary of the mega-cooperative;
- removing the statutory export monopoly at the end of the year 2000, opening the way for exporters of dairy products to choose how and through whom they market their dairy products;
- establishing a commodity milk price. A 'Q' class of shares covering returns on quota, which would be tradable among farmer suppliers, and an 'A' class of share covering all other returns, tradable among farmer suppliers within a range linked to volume of milk supply.

The draft legislation is one of four steps necessary to enable the New Zealand dairy industry to restructure. The merger of New Zealand's dairy cooperatives into one mega-cooperative will require approval from the Commerce Commission, dairy farmers and Parliament. If those approvals are obtained, the mega-cooperative is expected to be up and running as early as possible after the merger vote but no later than September 1, 2000. If Commerce Commission approval is not received or farmers do not vote to merge, the reform package will not proceed. In that event existing legislation will remain in place.

Source: USDA/FAS, 1999.

8.3 Other measures of agricultural support

8.3.1 Introduction

The agricultural assistance that New Zealand's farm-sector receives is very low in comparison with that of other OECD member countries (see Chapter 3). Expressed in Total Support Estimate, New Zealand's agricultural support amounted to only 0.19% its GDP in 1998. Of this small percentage, general services account for 55.2%. The primary general services are basic research and the control of pests and diseases. In addition to this, agri-environmental policies receive some support.

8.3.2 Agriquality New Zealand

Formerly part of the Ministry of Agriculture and Forestry, AgriQuality New Zealand was formed on November 1, 1998. Agriquality is an organisation that is concerned with all kind of farm-related issues. Agriquality is New Zealand's leading supplier of testing, analysis, and quality assurance systems for animal, plant, forestry and food products. Agriquality is focused around four business units: Farm Network, Assurance Services, Lab Network and Emergency Response. Customers of Agriquality include producers, processors, manufacturers, retailers and exporters in the agri-food business.

Farm Network

The aim of Farm Network is to enhance production quality and animal health. It offers advisory and technical services, which help with the identification and control of disease and other production limiting factors on farms. Customers have access to complete packages that include testing, consultancy and diagnostic capabilities.

Emergency Response

Emergency response is managing biosecurity and food safety threats. Emergency Response is able to mobilise teams of specialists from all parts of the organisation and trained contractors to manage and contain emergencies rapidly. The services are available to the government, industry sectors and to offshore customers.

Assurance Services

The goal of the Assurance Services is to enhance competitive positioning for producers, processors, distributors and retailers. It works in partnership with them providing consulting, advice, systems and training about achieving standards, enhancing quality and adding value through supply chain management.

Lab Network

Lab Network provides superior laboratory analysis for producers, processors and retailers. Lab Network helps customers to enhance their business by adding value to their products in terms of food safety and assurance. The laboratories provide an extensive range of analytical and consultancy services to a wide range of customers in New Zealand and overseas.

8.3.3 Adverse Events assistance

Sometimes, direct payments are granted for adverse climatic events and natural disasters. However, this occurs only in the event of large-scale emergencies of national significance that are beyond the response capacity of local farmer/grower organisations and territorial local authorities.

8.3.4 The Commodity Levies Act

Industry organisations use the Commodity Levies Act 1990 to obtain approval to collect compulsory levies from producers of commodities, to provide funds for specified purposes. Currently, 20 levies are in place under which organisations can collect money that can be spend on activities that benefit the levy payers (producers of the commodity on which a compulsory levy is imposed). Activities that are included are research and development, promotion, maintaining quality assurance programmes and the day to day administration of the organisation (MAF, 1996).

8.3.5 Trade Shows

New Zealanders are active participants in trade fairs worldwide. There is a high level of awareness for the food shows in the US, Europe and Asia. Within New Zealand there is the Foodservice show, which is a trade-only annual show featuring 200 exhibitors from all aspects of foodservice, catering, hospitality and accommodation.

8.3.6 Programmes promoting a sustainable agriculture

The role of New Zealand's government in promoting a sustainable agriculture is primarily that of encouraging market-led adjustment to sustainable practices. There has been set up an officials committee that co-ordinates departmental policies to ensure an integrated approach to achieving sustainable land management. In addition to MAF (the Ministry of Agriculture and Forestry), this group includes the Ministry for the Environment, and many other ministries and specialists. The current departmental programmes and activities that target sustainability problems associated with current land use include: the Rabbit and Land Management Programme; the Bovine Tuberculosis Control Scheme; the Adverse Climatic Events Relief; and research and information transfer activities. In addition, the Government has responsibilities and policies established by legislation and by Cabinet decisions. The Ministry for the Environment has responsibility for Resource Management Subsidies.

8.3.7 WTO compatibility of remaining measures of New Zealand's agricultural support

New Zealand's agricultural support measures are not under reduction commitments of the WTO (either green box or de minimis amber box support). The market-based approach implies only few government support measures, mainly related to training, extension, research, and information services.

9. Conclusion

In the foregoing chapters, agricultural support measures in the US, Canada, Australia and New Zealand have been described. Table 9.1 lists the main agricultural policy instruments together with those of the European Union. Not mentioned in this table are the programmes (of the EU and other countries) for financing losses caused by contagious animal diseases like swine fever, and foot-and-mouth disease. It should be further noted that general policies, such as social security systems and fiscal instruments in relation to income fluctuations of individual farmers, are excluded.

The following measures applied in the selected countries are not widely used in the CAP:

- price support measures such as commodity loans, price pooling, deficiency payments;
- decoupled income payments;
- subsidised saving funds for farmers (income stabilisation funds);
- risk management programmes;
- marketing boards;
- export credit programmes;
- domestic food aid.

For various reasons, some of these measures are not desirable policy alternatives. Price support, though in a different way, is already applied in the EU and seems to be incompatible with future WTO commitments. Moreover, marketing boards as well as domestic food aid are remote from the current EU agriculture and agricultural policies. However, decoupled income payments, income stabilisation funds, risk management programmes, and export credit programmes may offer promising alternatives.

Decoupled income payments

The original Production Flexibility Contracts offered by the US are considered in the WTO as green box support. The payments are intended to support farmers' incomes, and are financed by the Treasury. Decoupled payments are not tied in with the volume of production or productive factor inputs or the level of the market price. Direct income payments may be based on historical entitlements, a farmer's income level or on an established minimum income. Besides serving as an instrument of income policy, the direct income payment could also help to work towards certain structural or agri-environmental policy aims, as the government determines the criteria on which payments are provided or allocated. Linking the payments to specific goals, can be described as of form of 'recoupling' or 'cross compliance'. In the second phase of this research project, it could be examined how decoupled income payments may help achieving the objectives of the CAP.

	USA	Canada	Australia	New-Zealand	EU
Price support			§ 7.5.3; to be terminated in 2000		
Minimum price guarantee	§ 5.3.3	§ 6.3.2			Several products
Commodity loans	§ 5.3.3	§ 6.3.5			
Marketing quota	§ 5.3.3	§ 6.3.2		§ 8.2 some producer boards set quotas	Quota for milk, sugar, starch potatoes
Price pooling	§ 5.3.3	§ 6.3.4		§ 8.2	
Loan deficiency payments	§ 5.3.3				
Area or livestock –based direct income payments					Cereals and oilseeds Livestock
Decoupled income payments (production flexibility contracts)	§ 5.3.2				
Natural disaster assistance	§ 5.4		§ 7.4.4	§ 8.3.3	Occasionally in some member states
Funds for farmers' savings (supported by the government) to stabilise farm incomes		§ 6.4.3 NISA	§ 7.4.3 FMD		
Yield-based income insurance	§ 5.5.3	§ 6.4.3			Some member states
Revenue-based income insurance	§ 5.5.4	§ 6.4.4 (regional progr.)			
Risk management programmes with respect to options or futures	§ 5.5.5				
Other types of risk management programmes		§ 6.4.4	§ 7.4.2		Some member states

	USA	Canada	Australia	New-Zealand	EU
Direct (producer) retirement assistance			§ 7.4.6		Early retirement schemes
Loan and credit to farmers and farmers organisations	§ 5.10	§ 6.5.3	§ 7.4		National policies
Marketing boards with export powers		§ 6.3.2	§ 7.3	§ 8.2	
Export credit guarantee or insurance programmes	§ 5.6.2		§ 7.8.4		Occasionally in some member states
Export subsidies (such as EEP, DEIP, EU export subsidies)	§ 5.6.3 § 5.6.4				Several products
Miscellaneous export promotion and assistance programmes	§ 5.6	§ 6.6	§ 7.8	§ 8.2	Used
Food aid	§ 5.8	§ 6.6			Used
Marketing/ promotion (assistance to the transportation, marketing, promotion etcetera of agricultural products)	§ 5.9	§ 6.5.2	§ 7.3	§ 8.2 (producer boards)	Used
Domestic nutrition assistance programmes	§ 5.8				
Direct payments subject to environmental/conservation commitments	§ 5.3.7 § 5.7				Used
Miscellaneous agri-environmental programmes	§ 5.7	§ 6.7	§ 7.7	§ 8.3.6	Used
Rural development support	§ 5.11	§ 6.8	§ 7.6.	§ 8.3	Used
Infrastructural programmes	§ 5.11	§ 6.8.4	§ 7.6.		
Telecommunications programmes	§ 5.11		§ 7.6.		
Research, extension, education and information programmes	§ 5.12	§ 6.8.5	§ 7.4, § 7.7, § 7.8	§ 8.3.2	Used in EU and in member states

Figure 9.1 Agricultural support measures in selected countries

Income stabilisation funds
Income stabilisation funds or saving funds for farmers are used in Canada and Australia. Suchlike funds are primarily aimed at suppressing income instabilities. This is generally done by establishing a fund which receives contributions from farmers during good years in order to provide withdrawals in poor years. Governments may match basic contributions or may pay additional interest on funds. Some of the advantages of this income stabilisation measure concern the comparatively low administrative costs and the provision of protection at the farm level, rather than protection of crop yields and/or prices individually. Subsequent analyses of this policy instrument should show whether income stabilisation funds could be an alternative for current EU income stabilisation policies.

Risk management programmes
Risk management or insurance programmes are found in various shapes all over the world. Various kinds of risks are involved, such as animal and crop diseases, abnormal weather or natural conditions (drought, hail, frost, heavy rain etcetera), infra-structural collapses (electricity). Most of the current programmes are intended to provide short-term income stabilisation, without interfering significantly with markets for agricultural products. In general, risk management programmes do not serve the purpose of price or income assistance for farmers who have structural difficulties. Further analysis should consider whether risk management programmes could form a sort of safety net for EU farmers. And if so, in which shape and under which conditions risk management programmes should be provided to farmers. In this respect, the responsibility of farmers to restrict risks should be addressed, as well as options for co-financing.

Export credit programmes
Among other countries, the US and Australia facilitate the provision of credit for agricultural exports. Export credit programmes are directed at export promotion. Export credit (guarantee or insurance) is usually provided for export of commodities to countries for which credit is necessary to increase or maintain exports. Additional research is required to assess whether export credits could be an effective instrument to assist agricultural export of the EU and whether it could be an alternative for or a supplement to export subsidies. This instrument can be considered in relation to specific markets (countries, regions of the world) as well as to specific products. What concerns the selection of countries, it may be linked to development assistance policies.

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Appendix A: OECD indicators of agricultural support

A.1 Producer Support Estimate (PSE)

The PSE measures all transfers from taxpayers and consumers to producers individually. The indicator is a gross notion implying that any costs associated with those policies and incurred by individual producer are not deducted. It is also a nominal assistance notion meaning that increased costs associated with import duties on inputs are not deducted. However, it is an indicator net of producer contributions to help finance the policy measure, for example producer levies, providing a given transfer to producers. The PSE includes implicit and explicit payments such as price wedges on output or inputs, tax exemptions, and budgetary payments, including those for remunerating non-market goods and services. Although farm receipts (revenue) is increased (or farm expenditure reduced) by the amount of support, the PSE is not in itself an estimate of the impacts on production or income.

The percentage PSE is defined as the ratio between the PSE and the value of total gross farm receipts. For example, a percentage PSE of 60%, expresses the share of gross farm receipts derived from agricultural policies.

The producer Nominal Assistance Coefficient (NACp) is the ratio of the PSE to the value of total gross farm receipts valued at world market prices, without budgetary support. A NACp of 2.5 means that the value of gross farm receipts is 2.5 times of what they would be if entirely obtained at world prices without any budgetary support.

A.2 Consumer Support Estimate (CSE)

The CSE includes explicit and implicit consumer transfers to producers of agricultural commodities, measured at the farm gate (first consumer) level and associated with: market price support on domestically produced consumption; transfers to the budget and or importers on the share of consumption that is imported; net of any payment to consumers to compensate them from their contribution to market price support of a specific commodity; the producers contribution (as consumers of domestically produced crops) to the market price support on crops used in animal feed. When negative, transfers form consumers measure the implicit tax on consumption associated with agricultural policies. Although consumption expenditure is increased/reduced by the amount of the implicit tax/payment, the indicator is not in itself an estimate of the impacts on consumption expenditure.

The percentage CSE is defined as the ratio between the CSE and the total value of consumption expenditure on commodities domestically produced. For example, a percentage CSE of 60%, expresses the share of the consumption expenditure created by agricultural policies.

The consumer NAC is the ratio between the CSE and the total value of consumption expenditure on commodities domestically produced valued at world market prices. It measures the consumer price differential or the ratio between the price paid by consumers (at farm gate) and the border price.

A.3 General Services Support Estimate (GSSE)

The GSSE indicates the gross transfers to general services provided to agriculture collectively. It includes taxpayers transfers to: improve agricultural production; agricultural training and education; control of quality and safety of food, agricultural inputs, and the environment; improve of off-farm collective infrastructures, including downstream and upstream industry; assist marketing and promotion; meet the costs of depreciation and disposal of public storage of agricultural products; other general services not allocated to the above categories. Unlike the PSE and CSE transfers, these transfers are not received by producers or consumers individually. They do not affect farm receipts or consumption expenditure by their amount, but may affect production and consumption of agricultural commodities.

The percentage GSSE is defined as the share of support to general services provided to agriculture in the total support to agriculture (TSE). In a situation of public support to agriculture, the higher the percentage GSSE, the lower the share of support affecting individual decisions on domestic production and consumption of agricultural commodities.

A.4 Total Support Estimate (TSE)

The Total Support Estimate (TSE) measures the overall support to agricultural producers financed by consumers and taxpayers, net of import receipts. TSE is the sum of the explicit and implicit gross transfers from consumers of agricultural commodities to agricultural producers net of producer financial contributions; the gross transfers from taxpayers to agricultural producers; the gross transfers from taxpayers to general services provided to agriculture; and the gross transfers from taxpayers to consumers of agricultural commodities. In other words, TSE is the sum of the PSE, the transfers from taxpayers to consumers (in CSE), and the GSSE.

The percentage TSE is defined as the ratio of Total Support to the total Gross Domestic Product (GDP). The higher the percentage TSE, the larger the share of national wealth used to support agriculture.